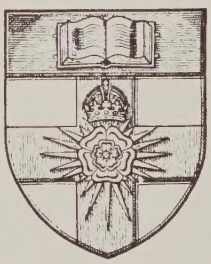
THIS BOOK
MUST NOT BE REMOVED
FROM THE LIBRARY

UNIVERSITY OF LONDON LIBRARY

1. Papers.

PARL. PAPERS
FOR REFERENCE ONLY.



UNIVERSITY OF LONDON
LIBRARY

608629

REPORTS

FROM

COMMISSIONERS, INSPECTORS,

AND OTHERS:

TWENTY-THREE VOLUMES.

—*(14.)*—

LOCAL GOVERNMENT BOARD.

Session

15 *February* —— 25 *August* 1883.

VOL. XXVIII.

1883.

BIBL. LONDIN. UNIV.

REPORTS

FROM

COMMISSIONERS, INSPECTORS,

AND OTHERS:

1883.

TWENTY-THREE VOLUMES:—CONTENTS OF THE

FOURTEENTH VOLUME.

N. B.—THE Figures *at the* beginning of the line, *correspond with the* N° *at the foot of each* Report; *and the* Figures *at the* end of the line, *refer to the* MS. Paging *of the Volumes arranged for The House of Commons.*

LOCAL GOVERNMENT BOARD:

[C. 3778.] Twelfth Annual Report of the Local Government Board, 1882-83, p. 1

[C. 3778-I.] Supplement to the Twelfth Annual Report of the Local Government Board, containing the Report of the Medical Officer for 1882 - - - - - - - - - - - - 623

TWELFTH ANNUAL REPORT

OF

THE LOCAL GOVERNMENT BOARD.

1882-83.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED BY EYRE AND SPOTTISWOODE.

To be purchased, either directly or through any Bookseller, from any of the following Agents, viz.,
Messrs. HANSARD and SON, 13, Great Queen Street, W.C., and 32, Abingdon Street, Westminster;
Messrs. EYRE and SPOTTISWOODE, East Harding Street, Fleet Street, and
Sale Office, House of Lords;
Messrs. ADAM and CHARLES BLACK, of Edinburgh;
Messrs. ALEXANDER THOM and Co., or Messrs. HODGES, FIGGIS, and Co., of Dublin.

1883.

[C.—3778.]

CONTENTS.

	Page
Relieving Officers	xxxviii
Work of Relieving Officers	xxxviii
In-door Relief. New Buildings	xxxix
Pauper Education	xxxix
School Attendance	xxxix
Casual Paupers	xl
Boarding-out Orphan and Deserted Children	xli
Poor Law Conferences	xlii
Emigration	xlii
Infectious Diseases in Workhouses	xlii
Danger from fire in Workhouses	xliii
Pauper Interments	xliii
Out-door Relief to Wives of Men in Army Reserve	xliv
Divided Parishes	xliv
Dismissals and Resignations of Officers	xlvi
Superannuation Allowances	xlvi
Audit	xlvi
Disallowances and Surcharges	xlviii
Appeals	xlviii
Examples of Disallowed Expenditure	xlviii
Expenditure on Buildings and Purchase of Sites for Poor Law purposes	l
Limitation of Expenditure and Borrowing Powers	li
Repayment of Loans	li
Amounts Borrowed	li
Sale of Union and Parish Property and Appropriation of Produce	li
Certified Schools	liv
Orders issued	liv
General Orders	liv
Triennial Service of Guardians	lv
Appeals with respect to Elections	lvi
Uniting Parishes for Elections	lvi
Division into Wards	lvii
Alterations in Unions	lvii
Alteration of School District	lvii
Alterations of Parishes	lviii
Adjustment of Interests	lx
Relief Committees	lx
District Relief Committees	lxi
Decisions on disputed Questions of Settlement	lxi
Regulations for Out-door Dispensary, separate Infirmary, and separate School	lxi
Securities for Loans to Poor Law Authorities approved and registered	lxi
Conveyances, Leases, and Agreements under Poor Law Acts	lxii
Vestry and Parochial Offices	lxii
Sale of exhausted Parish Lands	lxii
Appropriation of Land for Burial purposes	lxii
Grant of School Sites	lxii
List of Deeds registered	lxii
Poor Rate Expenditure for purposes other than Relief of the Poor	lxii
Poor Law legislation	lxiv

II.—The Administration of the Laws affecting Local Government and the Public Health.

	Page
Loans of Sanitary Authorities sanctioned by the Department	lxv
Loans authorised to be raised by Sanitary Authorities under Local Acts	lxx
Local Loans Act, 1875	lxxv
Recommendations to Public Works Loan Commissioners	lxxv
Public Works Loans Acts, 1875–82	lxxvi
Public Works Loans Act, 1882. Guarantee in respect of Harbour Loans	lxxvii
Notices to Commissioners no longer necessary	lxxviii
Sanitary Officers	lxxviii
Provisional Orders	lxxix
Powers of Compulsory Purchase	lxxxii
Repeal and Alteration of Local Acts and Confirming Acts	lxxxii
Gas and Water Works Facilities Act, 1870	lxxxvi
Extension of Municipal Borough	lxxxvi
Constitution and Alteration of Local Government Districts	lxxxvii
Alterations of Improvement Act Districts	lxxxvii
Adjustment of Interests	lxxxviii
United Districts	lxxxviii
Urban Powers conferred on Rural Sanitary Authorities	lxxxviii
Byelaws as to Houses let in Lodgings	lxxxix
Special Drainage Districts	lxxxix
Regulation of Steam-whistles	xc
Defaulting Authorities	xc
Port Sanitary Authorities	xcii
Appeals against Decision of Local Authority	xciv
Public Health (Water) Act, 1878	xcvi
Public Health (Interments) Act, 1879	xcvii
Municipal Corporations (Borough Funds) Act, 1872	xcviii
Local Inquiries	xcviii
Local Acts	xcviii
Private Bills	xcviii
Artizans and Labourers Dwellings Improvement Act, 1875	ci
Rivers Pollution Prevention Act, 1876	cii
Sale of Food and Drugs Act, 1875	ciii
Analyses	civ
Milk	cvii
Bread	cx
Butter	cx
Coffee	cx
Sugar	cx
Mustard	cxi
Jam	cxi
Confectionery	cxi
Wine	cxi
Beer	cxi
Spirits	cxii
Drugs	cxii
Samples from private Purchasers	cxii

CONTENTS.

	Page
Judicial Decision under Sale of Food and Drugs Acts	cxiii
Analyses of Tea by Customs	cxiii
Measures against Adulteration in Paris	cxiii
Vaccination	cxiv
London Vaccination Returns	cxvi
Country Vaccination Returns	cxvii
Vaccination Inspection and Awards	cxvii
Inquiries as to alleged Injury and Deaths through Vaccination	cxvii
Lymph Supply	cxviii
Animal Vaccination	cxviii
Vaccination by Public Vaccinators	cxviii
Medical Inspections	cxviii
School-closing for Infectious Disease	cxxi
Midwives and Puerperal Fever	cxxii
Annual Reports of Medical Officers of Health	cxxii
Special Sanitary Provisions in Local Acts	cxxiii
Compulsory Notification of Infectious Disease	cxxiv
Foreign Epidemics and Quarantine	cxxiv
Medical Officer's Report to be published separately	cxxv
Byelaws under Public Health Act, 1875	cxxv
Byelaws under Local Acts	cxxviii
Byelaws under the Highways and Locomotives (Amendment) Act, 1878	cxxix
The Artizans Dwellings Act, 1882	cxxx
Alkali, &c. Works Regulation Act, 1881	cxxxii
Metropolis Water Acts	cxxxiii
Highway Returns	cxxxv
Parliamentary Grant in Aid of Disturnpiked and Main Roads	cxxxvii
The Highway Rate Assessment and Expenditure Act, 1882	cxxxviii
Provisional Order under section 16 of the Highways and Locomotives (Amendment) Act, 1878	cxxxix
Turnpike Trusts	cxl
South Wales Turnpike Roads Act, 1882	cxli
Orders issued	cxli
Parliamentary Returns	cxli

III.—Local Taxation and Valuation.

Local Taxation Returns, 1880–81	cxli
Revenue from Local Taxation, during 11 years ended with 1881	cxlii
Local Loan Transactions	cxlii
Local Taxation; Non-remunerative and Remunerative	cxliii
Large Increase of the Remunerative Local Taxation	cxliv
Rates in Urban and in Rural Districts	cxliv
Treasury Subventions	cxlv
Local Valuations contrasted with Crown Valuations	cxlv
Contrasts in certain Counties	cxlvi
Valuation to the Poor Rate, in 1871 and 10 following years	cxlvii
Valuation in every Parish, 1881	cxlvii
Valuation to the Poor Rate in the Metropolis in 1871 and 10 following years	cxlviii
Changes in the Staff	cxlviii

CONTENTS.

APPENDIX.

(A.)—Circulars, &c. issued by the Local Government Board.

Page

No. 1, Alkali, &c. Works Regulation Act, 1881 (Registration of Works).—General Order 3

No. 2. Election of Guardians.—Circular Letter to Boards of Guardians . . 4

No. 3. Danger from Fire in Workhouses.—Circular Letter to Boards of Guardians 6

No. 4. Casual Paupers suffering from Small-pox.—Circular Letter to Boards of Guardians 8

No. 5. Rates on Outgoing Occupiers.—Circular Letter to District Auditors . 9

No. 6. Pauper Lunatics (Repayments from Parliamentary Grant).—Circular Letter to Boards of Guardians 10

No. 7. Pauper Interments.—Circular Letter to Boards of Guardians . . . 10

No. 8. Infectious Diseases in Workhouses.—Circular Letter to Boards of Guardians 11

No. 9. Age of Children sent to Imbecile Asylum.—Circular Letter to Boards of Guardians (Metropolis) 12

No. 10. Model Byelaws: Mortuaries and Offensive Trades.—Circular Letter to Urban Sanitary Authorities 13

No. 11. Model Byelaws: Mortuaries.—Circular Letter to Rural Sanitary Authorities 14

No. 12. Model Byelaws: Mortuaries and Offensive Trades.—Circular Letter to Rural Sanitary Authorities in the exercise of certain Urban Powers 15

No. 13. Model Byelaws.—(With Prefatory Memorandum) as to Mortuaries . 15

No. 14. Model Byelaws.—(With Prefatory Memorandum) as to Offensive Trades 20

No. 15. Provisional Orders.—Circular Letter to Sanitary Authorities, enclosing copy of Instructions with regard to Applications to the Board for Provisional Orders under the Public Health Act, 1875 . . . 38

No. 16. Ditto.—Instructions 40

No. 17. Hop Pickers.—Circular Letter to Sanitary Authorities 42

No. 18. Relief of Wives of Men in the First Class Army Reserve.—Circular Letter to General Inspectors, enclosing Memorandum on subject . 43

No. 19. Ditto: Memorandum.—Extracts from the Regulations for Mobilisation of First Class Army Reserve for Permanent Service . . 44

No. 20. Poor Law Legislation in the Session of 1882.—Circular Letter to Boards of Guardians 45

No. 21. Divided Parishes and Poor Law Amendment Act, 1882, and Poor Rate Assessment and Collection Act, 1869, Amendment Act, 1882.—Circular Letter to Overseers of the Poor 50

No. 22. Auditors' Reports.—Circular Letter to District Auditors . . . 52

No. 23. Public Works Loans Act, 1875.—Circular Letter to Sanitary Authorities, calling attention to section 13 of the Act 53

No. 24. Artizans Dwellings Act, 1882.—Circular Letter to Urban Sanitary Authorities 53

No. 25. Ditto.—Circular Letter to Boards of Guardians (Metropolis) . . 55

CONTENTS.

Page

No. 26. General Order.—Prescribing Register of Securities under 45 & 46 Vict. c. 58. s. 14 56

No. 27. Periodical Return of Sickness in Metropolitan Pauper Schools.—Circular Letter to Boards of Guardians, &c. (Metropolis), enclosing Form of Return 60

No. 28. Ditto.—Form of Return 61

No. 29. Officers' Entertainments.—Circular Letter to Metropolitan Boards of Guardians and Managers of Sick Asylum Districts . . . 62

No. 30. Casual Poor Act, 1882.—Circular Letter to Boards of Guardians enclosing copies of General Order 62

No. 31. Ditto.—General Order 64

No. 32. Casual Paupers.—General Order rescinding Regulations . . . 71

(B.)—Reports and Inquiries.

No. 33. Education of Pauper Children in the Northern District.—Report for 1882, by J. R. Mozley, Esq., Inspector of Poor Law Schools . 74

No. 34. Ditto in Western District.—Tables showing the Number of Children examined, together with the Results of the Examination :—furnished by the Rev. Dr. Clutterbuck, Inspector of Poor Law Schools . 80

No. 35. Ditto in Metropolitan District.—Report for 1882, by Wyndham Holgate, Esq., Inspector of Poor Law Schools 96

No. 36. Ditto in the Midland and Eastern District.—Report for 1882, by Byam Davies, Esq., Inspector of Poor Law Schools 107

No. 37. Turnpike Trusts and Highways.—General Report for 1880–81 . . 110

No. 38. Metropolis Water Act, 1871.—Report by Colonel Frank Bolton (Water Examiner) 120

No. 39. Ditto.—Report by Allen Stoneham, Esq. (Auditor) . . . 134

No. 40. Metropolitan Water Supply.—Report by Professor Frankland, D.C.L., F.R.S., &c., on the Analysis of the Waters supplied during the year 1882 137

(C.)—Poor Rates, &c.: Receipts and Expenditure.

No. 41. Poor Rate Return.—Remarks on the Annual Poor Rate Return, Year ended Lady-day 1882 150

No. 42. Poor Rate Return.—Summary of Poor Rate Returns, Year ended Lady-day 1882 160

No. 43. Expenditure for the Relief of the Poor.—Comparative Statement, Years ended Lady-day 1881 and 1882 164

No. 44. Poor Rates levied and expended.—Serial Summary, 41 Years, 1842 to 1882 166

No. 45. Statement of the Six Principal Items which constitute Relief to the Poor.—26 Years, ended with Lady-day 1882 168

No. 46. Poor Rates levied and expended.—Rate per head and Rate in the £, for 41 Years, 1842 to 1882 inclusive 169

No. 47. In-maintenance and Out-door Relief.—Remarks, Half-year ended Lady-day 1882 170

No. 48. In-maintenance and Out-door Relief.—Comparative Statement, Half-years ended Lady-day 1881 and 1882 173

CONTENTS.

Page

No. 49. In-maintenance and Out-door Relief. — Remarks, Half-year ended Michaelmas 1882 175

No. 50. In-maintenance and Out-door Relief.—Comparative Statement, Half-years ended Michaelmas 1881 and 1882 178

(D.)—Number of Paupers Relieved. Expenditure in Metropolitan Workhouses, Infirmaries, Asylums, and Hospitals.

No. 51. Return of Pauperism.—Remarks, 1st January 1882 183

No. 52. Return of Paupers.—Summary, 1st January 1882 186

No. 53. Paupers of all Classes.—Comparative Statement, 1st January 1881 and 1882 190

No. 54. Adult Able-bodied Paupers.—Comparative Statement, 1st January 1881 and 1882 192

No. 55. Pauperism.—Remarks on Return of Number of Paupers on 1st July 1882 194

No. 56. Return of Paupers.—Summary of In-door and Out-door on 1st July 1882 . 196

No. 57. Paupers of all Classes.—Comparative Statement, 1st July 1881 and 1882 . 200

No. 58. Adult Able-bodied Paupers.—Comparative Statement, 1st July 1881 and 1882 202

No. 59. Census of Paupers.—Serial Statement from 1861 to 1882 . . . 204

No. 60. Mean Number of Paupers of all Classes and of the Adult Able-bodied in England for 34 Years, 1849–82 206

No. 61. Metropolitan Pauperism.—Comparative Statement of the Number on the last Day of each Quarter, 1881 and 1882 208

No. 62. Metropolitan District.—Area, Population, Pauperism, and Rateable Value, Year 1882 210

No. 63. Summary of Returns of Out-door Relief Arrangements (Metropolis), Year ended 25th December 1881 212

No. 64. Summary of Out-door Medical Relief Returns (Metropolis), Year ended ended 25th December 1882 214

No. 65. Admissions into Metropolitan Casual Wards during Years 1877, 1880, and 1882. Identification of Habitual Vagrants and Number of Refusals of Admission during 1882 216

No. 66. Number of Admissions into Metropolitan Casual Wards during each Month of the Years 1877, 1880, and 1882 218

No. 67. Average Nightly Number of Admissions to each Metropolitan Casual Ward in each Month of the Years 1877, 1880, and 1882 . . 219

No. 68. Prosecutions of Casual Paupers in the Metropolis under Detention as Habitual Vagrants, during the 10 Years 1873–82 222

No. 69. Return of Average Prices paid for various Articles used in the Metropolitan Workhouses during Year ended Lady-day 1882 . . 223

No. 70. Return of Average Prices paid for various Articles used in the Metropolitan Infirmaries, Asylums, and Hospitals, during Year ended Lady-day 1882 227

No. 71. Expenditure during Year ended Lady-day 1882 at the Metropolitan Workhouses 231

No. 72. Expenditure during Year ended Lady-day 1882 in the Metropolitan Infirmaries, Asylums, and Hospitals 237

CONTENTS.

(E.)- Education of Pauper Children. Expenditure in Metropolitan District and Separate Schools. Employment of Children sent from Pauper Schools. Boarding-out Committees.

Page

No. 73. Daily Average Attendance at School during the Half-year ended Lady-day 1882 244

No. 74. Schools certified for the Reception of Children under the Act 25 & 26 Vict. c. 43. 267

No. 75. Expenditure during the Year ended at Lady-day 1882, at the Metropolitan District and Separate Schools 268

No. 76. Average Prices Paid, during the Year ended at Lady-day 1882, for various Articles used in the Metropolitan Schools 273

No. 77. Nature of Employments in which children from Metropolitan Pauper Schools were placed during the Year 1882 277

No. 78. List of Boarding-out Committees authorised to act 281

(F.)—Expenditure authorised by the Board for purchasing, erecting, altering, or enlarging Workhouses, &c. in accordance with Plans approved by the Board or for purchasing Land for sites or other purposes.

Ditto District Schools and Asylums.

Sale of Property of Unions, Parishes, and District Schools, and Appropriation of Produce.

Deeds Approved, Sealed, and Registered.

No. 79. Workhouses, &c., Expenditure in purchasing, building, altering, or enlarging, &c., Year 1882 286

No. 80. District Asylums and Schools ditto, Year 1882 293

No. 81. Sale of Union and Parish Property and Appropriation of Produce, Year 1882. 294

No. 82. Appropriation of Produce of Sale of District School Property, Year 1882 302

No. 83. List of Deeds Approved, Sealed, and Registered, Year 1882 303

(G.)—Vaccination.

No. 84. Vaccination.—Summary of Returns, Year ended 29th September 1882 . 306

No. 85. Ditto.—Number vaccinated in each year from 1852 to 1872 . . 308

No. 86. Ditto.—Number of successful primary Vaccinations, Years 1873 to 1882 308

No. 87. Ditto.—Digest of Vaccination Officers' Returns for 1880 309

No. 88. Ditto.—Inspection of Public Vaccination and an Account of Awards made to Public Vaccinators out of Parliamentary Grant . . . 325

No. 89. Ditto.—National Vaccine Establishment, and Educational Vaccination Stations 330

(H.)—Metropolitan Poor Common Fund.

No. 90. The Expenses incurred by Unions and Parishes under section 69 of "The Metropolitan Poor Act, 1867," and the Acts amending the same, during the Half-year ended Lady-day 1881, and repayable from the Metropolitan Common Poor Fund 334

CONTENTS.

Page

No. 91. The Rateable Value of and Amount of Contribution assessed on each Union, Parish, and Place in the Metropolis, the Expenditure repayable, and the Net Amounts contributed or received by Unions and Parishes in respect of the Half-year ended Lady-day 1881 335

No. 92. The Expenses incurred by Unions and Parishes under section 69 of "The Metropolitan Poor Act, 1867," and the Acts amending the same, during the Half-year ended Michaelmas 1881, and repayable from the Metropolitan Common Poor Fund 336

No. 93. The Rateable Value of and Amount of Contribution assessed on each Union, Parish, and Place in the Metropolis; the Expenditure repayable, and the Net Amounts contributed or received by Unions and Parishes in respect of the Half-year ended Michaelmas 1881 . . 337

No. 94. The Net Amounts received from the Fund by Unions and Parishes in respect of the Half-year ended at Lady-day 1868, and each of the parochial Years ended at Lady-day 1869–81 338

No. 95. The Net Amounts contributed to the Fund by Unions, Parishes, and Places in respect of the Half-year ended at Lady-day 1868, and each of the parochial Years ended at Lady-day 1869–81 339

No. 96. The Aggregate Expenditure for the under-mentioned purposes charged upon the Fund in respect of the Half-year ended at Lady-day 1868, and each of the Parochial Years from 1869 to 1881 inclusive . . 340

(I.)—Paid Officers, &c.

No. 97. Paid Officers.—Number Resigned and Dismissed in England and Wales (exclusive of the Metropolis) in 1882 342

No. 98. Ditto.—Ditto in the Metropolis only, in 1882 343

No. 99. Ditto.—Number superannuated in England and Wales (inclusive of the Metropolis) in 1882 344

(J.)—Local Taxation Returns.

No. 100. Summary Statement of Local Taxation for the Year 1880–81 . . 346

No. 101. Ditto ditto County Rates, 1880–81 359

No. 102. Parliamentary Grants in aid of Local Taxation.—Statement showing the Amount paid to each Union, &c. in England and Wales during the Year ended Lady-day 1882 360

No. 103. Parliamentary Grant in aid of Disturnpiked and Main Roads.—Statement showing the Amounts paid to Highway Authorities in England and North Wales during the Year ended Lady-day 1883 . . 372

(K.)—Local Government and Public Health.

No. 104. Loans sanctioned to Urban Sanitary Authorities during the Year ended 31st December 1882 376

No. 105. Ditto Rural Sanitary Authorities during same period . . . 385

No. 106. Loans recommended by the Board to be advanced by the Public Works Loan Commissioners to Urban Sanitary Authorities, under section 243 of the Public Health Act, 1875, during the Year ended 31st December 1882 389

CONTENTS.

Page

No. 107. Loans recommended by the Board to be advanced by the Public Works Loan Commissioners to Rural Sanitary Authorities under section 243 of the Public Health Act, 1875, during the Year ended the 31st December 1882 392

No. 108. Local Government Districts constituted during the Year 1882, in pursuance of Resolutions of Owners and Ratepayers 395

No. 109. Local Government Districts and Improvement Act Districts extended by Provisional Order during the Year 1882 396

No. 110. Provisional Orders issued in 1882 397

No. 111. List of Confirming Acts passed in 1882, and of Provisional Orders thereby confirmed 402

No. 112. Local Acts promoted by Urban Sanitary Authorities, &c., during the Session of 1882 405

No. 113. Byelaws confirmed by the Board in 1882 406

No. 114. Byelaws confirmed under the Highways and Locomotives (Amendment) Act, 1878 409

No. 115. Inquiries held by Inspectors in 1882 410

No. 116. List of Port Sanitary Authorities as existing on the 31st December 1882 431

No. 117. Statement of Rural Sanitary Authorities upon whom Urban Powers have been conferred during the Year 1882 436

No. 118. List of Special Drainage Districts formed or dissolved during the Year 1882 439

No. 119. Abstract of Reports of Public Analysts for the Year 1882 . . . 440

No. 120. Report of Analyst to Commissioners of Customs on the Examinations of Tea made under section 30 of the Sale of Food and Drugs Act, 1875 442

No. 121. Extract from Letter from the Principal Officer of the Commissioners of Inland Revenue as to Milk Standards 444

No. 122. Number of Works in each County of England and Wales, Scotland, and Ireland registered under the Alkali, &c. Works Regulation Act, 1881, in the Year 1882 445

(L.)—Allowances, Disallowances, and Surcharges.

No. 123. Disallowances and Surcharges made by District Auditors during the Year ended 31st December 1882 448

No. 124. Appeals against Allowances, Disallowances, and Surcharges . . 449

(M.)—Orders.

No. 125. Orders issued, Year 1882 :

Poor Law and the Poor Rate 452

Local Government and Public Health 455

No. 126. General Orders issued, Year 1882 457

(N.)—Parliamentary Returns.

No. 127. List of Reports, Returns, and other Documents prepared by the Board and presented to Parliament during the Session 1882 . . . 460

REPORT.

To the Queen's most Excellent Majesty.

Local Government Board, Whitehall,
30th May 1883.

May it please Your Majesty,

We, the Local Government Board, beg leave to present to Your Majesty the following Report.

In accordance with our practice in recent years, the statements and observations which we have the honour to submit to Your Majesty will be divided into three parts, as they relate to, 1st, the Relief of the Poor and the Poor Rate, 2ndly, Local Government and the Public Health, and 3rdly, Local Taxation and Valuation.

I.—*Relief to the Poor and the Poor Rate.*

Expenditure on the relief of the poor.

The Census having been taken during the parochial year, the statistics of which are given and discussed in the present Report, a fitting opportunity arises for contrasting the leading facts and figures in relation to the pauperism and poor law expenditure of the country, as given in the poor law Returns for the parochial years 1882 and 1872, and for summarising some of the principal changes that have taken place during the intervening ten years.

In 1872, the population of England and Wales was 23,000,000; the mean number of paupers computed on the July and January enumerations of the parochial year was 977,200, of whom 150,930 were adult able-bodied persons; the total cost of the relief of the poor was 8,007,403*l.* and the rateable value of the property

liable to contribute to such relief was 107,398,242*l.* In 1882, though the population had risen to 26,055,000, the mean number of paupers had fallen to 788,289, of whom 102,208 only were adult able-bodied persons; and though the total cost of the relief of the poor had grown to 8,232,472*l.*, the rateable value of the property liable to contribute to the poor rate had become 139,636,307*l.* In other words, though the population had increased more than 13 per cent. there had been an absolute decrease of more than 19 per cent. in the mean number of paupers and a decrease of 32 per cent. in the number of adult able-bodied paupers; and though there had been an increase of something less than 3 per cent. in the amount expended on the relief of the poor, the rateable value of the property, on which this expenditure was a charge, had increased to the extent of more than 30 per cent.

The absolute decrease in the pauperism of the country, as shown by the above figures is considerable; but it is the more remarkable, when the increase of the population in the meanwhile is taken into account. The mean number of paupers amounted in 1872 to a twenty-fourth part of the population of the country, whilst in 1882 it was less than a thirty-third part of the population. In 1872, the mean number of adult able-bodied paupers was equal to one out of every 150 of the population, and in 1882 to only one out of every 254.

Allowing for the growth in the rateable value, the expenditure on the relief of the poor for the parochial year 1882 represented a lower rate in the pound on the property liable to contribute to it than in any other year of which the statistics are ascertainable. If, however, the growth in the rateable value is disregarded, the expenditure showed an absolute increase of 130,336*l.*, or 1·6 per cent. as compared with the preceding year. In 17 Union Counties there was an increase amounting in all to 228,083*l.* In the remaining 30 there was a decrease, amounting to 97,747*l.* The following statement shows in what counties respectively there was an increase or decrease, and what was the difference per cent., as compared with the year 1881.

Increase per Cent.

Kent (Metropolitan)	21·3	Sussex	2·3
Surrey (Metropolitan)	9·3	Dorset	1·7
Middlesex (Metropolitan)	8·7	Surrey (Extra Metropolitan)	1·5
Middlesex (Extra Metropolitan).	5·4	Derby	0·7
		York, East Riding	0·7
South Wales	3·9	Kent (Extra Metropolitan)	0·6
Nottingham	3·4	Westmoreland	0·4
York, West Riding	2·8	Devon	0·1
Oxford	2·7	Salop	0·0

Decrease per Cent.

Southampton	0·0	Warwick	1·5
Worcester	0·2	Huntingdon	1·8
Hertford	0·3	Northampton	2·2
Cambridge	0·4	Suffolk	2·4
Somerset	0·4	Rutland	2·4
Hereford	0·6	Gloucester	2·5
Bucks	0·7	Essex	2·7
York, North Riding	0·7	Monmouth	2·7
Stafford	0·8	Berks	2·8
Leicester	0·8	Durham	3·0
Chester	0·9	Cornwall	3·6
Lincoln	1·0	Lancaster	3·7
Wilts	1·3	Northumberland	6·7
Cumberland	1·3	Bedford	6·8
Norfolk	1·4	North Wales	8·8

The expenditure on poor relief during the year represented an average impost of 6*s.* $3\frac{3}{4}$*d.* per head on the population, and an average rate of 1*s.* 2·1*d.* in the £ on the rateable value of the property contributing to the poor rate. The following table furnishes materials for a comparison of this expenditure with that of the 10 preceding years, and shows also the proportion which the expenditure in each year bore to population and rateable value. It will be observed that, though the rate per head on the population was slightly higher than in any of the seven preceding years with the exception of 1880, it was slightly below the average of the 11 years, and very considerably less than the rate per head in 1872. The

rate in the £ was lower than in any preceding year. As compared with 1872, it shows a reduction of $3\frac{1}{2}d.$ or 20 per cent.

I.—All England.

Parochial Year.	Population.*	Relief to the Poor.	Rate per head on Population.	Rate in £ on Rateable Value.
		£	*s.* *d.*	*s.* *d.*
1872 -	23,000,000	8,007,403	6 $11\frac{1}{2}$	1 5·6
1873 -	23,300,000	7,692,169	6 $7\frac{1}{4}$	1 4·4
1874 -	23,580,000	7,664,957	6 6	1 4·4
1875 -	23,860,000	7,488,481	6 $3\frac{1}{4}$	1 3·5
1876 -	24,160,000	7,335,858	6 $0\frac{3}{4}$	1 2·8
1877 -	24,460,000	7,400,034	6 $0\frac{1}{2}$	1 2·3
1878 -	24,760,000	7,688,650	6 $2\frac{1}{2}$	1 2·4
1879 -	25,010,000	7,829,819	6 $3\frac{1}{4}$	1 2·3
1880 -	25,323,000	8,015,010	6 4	1 2·4
1881 -	25,968,000	8,102,136	6 3	1 2·3
1882 -	26,055,000	8,232,472	6 $3\frac{3}{4}$	1 2·1

* The population of 1881 is that enumerated in the preliminary Census; the other figures are deduced from the estimates published by the Registrar-General.

Similar particulars with respect to each of the parochial years from 1842 downwards, will be found in the Appendix, page 169.

Items of relief.

In the following table the amounts of the several items of the expenditure for the year, so far as they are ascertainable, are separated and contrasted with the corresponding amounts expended in the preceding year.

II.—All England.

——	1881.	1882.	Difference in 1882.	
			More.	Less.
	£	£	£	£
1. In-maintenance - -	1,838,641	1,831,595	- -	7,046
2. Out-relief - - -	2,660,022	2,626,375	- -	33,647
3. Maintenance of Lunatics in Asylums or Licensed Houses	1,033,780	1,059,460	25,680	—
4. Workhouse and other loans repaid and interest - -	338,419	351,203	12,784	—
5. Salaries and Rations of Officers and Superannuations	1,069,188	1,087,641	18,453	-
6. Other Expenses of or immediately connected with Relief - - -	1,135,286	1,296,523	161,237	—
Total Relief to the Poor -	8,102,136*	8,232,472*	130,336	—

* The discrepancy between these totals and the sum of the six items arises in adjusting the charges for Relief to the Poor in the Metropolis through the Common Poor Fund.

Though the result of the comparison on the whole is to show some increase, yet it is noticeable that both the in-maintenance and the out-relief decreased; the former by 7,046*l.* and the latter by 33,647*l.*, or 1·2 per cent.

The Appendix (p. 168) contains a statement, showing the amounts of the above items of expenditure for the last 26 years. On examining the figures there given, with a view of ascertaining the changes which have taken place during the last decade, it will be found that, though the cost of the in-maintenance rose from 1,515,790*l.* in 1872 to 1,831,595*l.* in 1882, the cost of the out-relief fell from 3,583,571*l.* in the former to 2,626,375*l.* in the latter year. In other words, the increase of 315,805*l.* in the in-maintenance was attended by a decrease of 957,196*l.* in the out-relief, leaving a net decrease of 641,391*l.* or upwards of 12 per cent. on the aggregate of the two items, notwithstanding an interim growth of 13 per cent. in the population. These figures indicate that the growing tendency of the Guardians to test the claims of applicants for relief by offering the workhouse has not been without effect in reducing the amount of expenditure on the relief of the poor. There can be little doubt that, if the principle of applying this test were more frequently adopted than it is in some districts, a material reduction in the poor law expenditure might be effected.

The following Table shows the amounts expended in each of the years from 1872 to 1882, both inclusive, on in-maintenance and out-relief, and the maintenance of lunatics in asylums or licensed houses. It will be observed that the amounts expended under the latter head have increased in each of the 11 years; but that this increase, when added to the increase in the in-maintenance, is far more than counterbalanced by the decrease in the out-relief.

III.—All England.

Parochial Year.	In-Maintenance.	Out-Relief.	Maintenance of Lunatics in Asylums or Licensed Houses.*
	£	£	£
1872 - -	1,515,790	3,583,571	742,483
1873 - -	1,549,403	3,279,122	780,927
1874 - -	1,649,333	3,110,896	830,454
1875 - -	1,577,596	2,958,670	859,073
1876 - -	1,534,224	2,760,804	883,267
1877 - -	1,613,757	2,616,465	911,426
1878 - -	1,727,340	2,621,786	957,119
1879 - -	1,720,947	2,641,558	986,050
1880 - -	1,757,749	2,710,778	994,204
1881 - -	1,838,641	2,660,022	1,033,780
1882 - -	1,831,595	2,626,375	1,059,460

* This includes only those pauper lunatics in asylums, &c. who were chargeable to the *poor rates*.

In our last Report we adverted to the advantages of relief in kind over relief by doles of money. Occasion was taken to quote the opinion of the Poor Law Commissioners for England and Wales upon this subject. That great differences exist in the extent to which relief in kind is administered will be seen from the following Table, which gives the amounts expended during the parochial year 1882 on out-relief in money and in kind, and the ratio which the latter expenditure bore to the former in each of the divisions of the country.

In the Northern Counties, *i.e.*, Northumberland, Durham, Cumberland, and Westmoreland, only 1·2 per cent. of out-door relief was given in kind; but, in the Eastern Counties, Essex, Suffolk, and Norfolk, the proportion was 43·2 per cent.

IV.—All England.*

Divisions.	Out-door Relief.		Ratio of Relief in Kind to Relief in Money.
	In Money.	In Kind.	
	£	£	Per cent.
The Metropolis -	156,736	38,879	24·8
South-Eastern -	194,521	54,947	28·2
South Midland -	193,081	36,748	19·0
Eastern - -	130,880	56,567	43·2
South-Western -	303,533	31,578	10·4
West Midland -	260,601	39,415	15·1
North Midland -	176,240	9,956	5·6
North-Western -	203,654	15,480	7·6
York - - -	237,867	13,005	5·5
Northern - -	129,625	1,618	1·2
Welsh - -	289,078	10,995	3·8
Total -	2,275,816	309,188	13·6

* The figures in this Table are taken from the unaudited half-yearly statements and are exclusive of "further relief" as school fees.

Great differences also exist in the ratio which the expenditure on out-relief bears to that on in-maintenance in the several divisions. From the following tabular statement it will be seen that, in the past year, while in the Metropolis the cost of the out-relief was little more than one-third that of the in-maintenance, the proportions in the remainder of England, with the exception of the North Western Division, were reversed, and the expenditure on out-relief was considerably in excess of that on in-maintenance, being in Wales more than five times as great. As we have already pointed out, these figures indicate that a material reduction in the poor law expenditure of the country might be effected by a judicious reduction in the amounts expended in some districts on out-relief.

V.—All England, 1882.

Divisions.	In-maintenance.	Out-relief.	Total In-door and Out-door Relief.	Ratio of Out-Relief to Total.
	£	£	£	Per cent.
Welsh - -	60,793	305,827	366,620	83·4
South-Western -	98,802	338,057	436,859	77·4
North Midland -	77,828	188,015	265,843	70·7
Northern - -	59,713	134,562	194,275	69·3
South Midland -	107,243	232,052	339,295	68·4
Eastern - -	92,769	189,651	282,420	67·2
York - -	127,998	259,823	387,821	67·0
West Midland -	185,815	303,622	489,437	62·0
South-Eastern -	208,232	251,614	459,846	54·7
North-Western -	242,410	224,395	466,805	48·1
The Metropolis -	569,992	198,757	768,749	25·9
All England -	1,831,595	2,626,375	4,457,970	58·9

The figures in the foregoing Tables relate in each case to the poor law expenditure for the parochial years ended at Lady-day, as shown in the Annual Poor Rate Returns.

Poor rate returns for Michaelmas 1882.

In the Appendix, pp. 175 and 178 will be found Returns as to the expenditure in each of the 11 divisions of England and Wales on in-maintenance and out-door relief during the half years ended at Michaelmas 1881 and Michaelmas 1882. From these Returns it will be seen that there was a decrease amounting to 12,612*l.* in the aggregate of these items during the latter half year as compared with the former. This decrease is entirely attributable to a reduction in the expenditure on out-relief, the cost of the in-maintenance having increased by 10,522*l.*, while that of the out-relief had decreased by 23,134*l.*

In-door and out-door paupers.

Passing from the statistics of the expenditure on relief to those relating to the persons relieved, we find, as

already stated, that the mean number of paupers relieved in the parochial year 1882 was 788,289, as against 977,200 in 1872. From the following Table, which gives the mean number of in-door and out-door paupers for each year from 1872 to 1882, both inclusive, and their ratio per 1000 of the population in each year, it will be seen that, while the mean number relieved in every 1000 of the population was 42 in 1872, it was only 30 in 1882. In two years, viz. 1877 and 1878, it was even lower. The whole decrease, it will be observed, is attributable to the reduction in the number of out-door paupers, the in-door paupers having increased from 149,200 to 183,374. There can be little doubt that the great diminution in the number of the out-door poor is to a considerable extent attributable to the salutary effect of applying the workhouse test, and it should be noted that the diminution of the number of out-door paupers during the decade by 223,085 was accompanied by an increase of only 34,174 in the number of those relieved in the workhouse.

VI.—All England.

Parochial Year.	Mean Number of Paupers.			Ratio per 1,000 of Population.
	In-door.	Out-door.*	Total.	
1872	149,200	828,000	977,200	42
1873	144,338	739,350	883,688	38
1874	143,707	683,739	827,446	35
1875	146,800	654,114	800,914	34
1876	143,084	606,392	749,476	31
1877	149,611	570,338	719,949	29
1878	159,219	569,870	729,089	29
1879	166,852	598,603	765,455	30
1880	180,817	627,213	808,030	32
1881	183,872	607,065	790,937	30
1882	183,374	604,915	788,289	30

* The out-door paupers are inclusive of those chargeable to the poor rates who are in county and borough asylums or in licensed houses.

The extent to which the out-door paupers have diminished in number as compared with the paupers of all classes is shown by the following Table, from which it will be seen that in every 1,000 of the mean number of paupers as many as 769 were still in the parochial year 1882 in receipt of out-door relief. That this number is in excess of what it might fairly be expected to be, may be inferred from the fact that in the Metropolis the mean number of out-door paupers was less than that of the in-door paupers.

VII.—All England.

Parochial Year.	Mean Number of Paupers.	Number thereof who were Out-door Paupers.	Proportion of Out-door in each 1,000 of Mean Number.
1872 - -	977,200	828,000	847
1873 - -	883,688	739,350	837
1874 - -	827,446	683,739	826
1875 - -	800,914	654,114	817
1876 - -	749,476	606,392	809
1877 - -	719,949	570,338	792
1878 - -	729,089	569,870	782
1879 - -	765,455	598,603	782
1880 - -	808,030	627,213	776
1881 - -	790,937	607,065	768
1882 - -	788,289	604,915	767

Adult able-bodied paupers.

We have already drawn attention to the marked decrease during the decade in the mean number of adult able-bodied paupers, which in 1872 amounted to 150,930, and in 1882 to 102,208 only. This decrease has taken place entirely among the out-door paupers. In the years 1876 to 1878, both inclusive, the total mean number of able-bodied paupers relieved in and out of the workhouse was smaller than it was in the parochial year 1882; but with these exceptions the mean number relieved during the latter year was less than in any other year of the decade. The diminution as compared with 1872 was more than 32 per cent., without taking into account the increase in the population. If allowance is made for that increase it was more than 40 per cent. The following Table shows the mean numbers of this class of paupers in and out of the workhouses, and their ratio to the population during each of the years from 1872 to 1882, both inclusive. It should be stated that

the numbers here given do not include vagrants, because adult vagrants are not distinguished in the Returns :—

VIII.—All England.

Parochial Year.	Mean Number of Adult Able-bodied Paupers.			Ratio per 1,000 of Population.
	In-door.	Out-door.	Total.	
1872	22,000	128,930	150,930	6·6
1873	19,331	105,594	124,925	5·4
1874	18,222	93,763	111,985	4·7
1875	18,487	89,918	108,405	4·5
1876	16,059	79,958	96,017	4·0
1877	16,446	72,952	89,398	3·7
1878	18,025	74,261	92,286	3·7
1879	19,109	85,861	104,970	4·2
1880	22,584	93,201	115,785	4·6
1881	22,515	82,485	105,000	4·0
1882	22,251	79,957	102,208	3·9

Pauper statistics.

Further statistics in reference to pauperism are given in the Appendix which contains (1.) (pages 186 to 189, 196 to 199), summaries showing the numbers of able-bodied, infirm, and lunatic, insane or idiot paupers in receipt of in-door and out-door relief on the 1st of January and the 1st of July 1882, distinguishing males and females over 16 years of age from children under that age; (2.) (pages 190 and 192, 200 and 202), tabulated comparative statements, contrasting the numbers of paupers in receipt of relief on those days with the numbers receiving relief on the corresponding days in 1881; (3.) (pages 204 and 205), a serial statement from 1861 to 1882, both inclusive, giving the numbers on the corresponding days in each year of every class of paupers, including vagrants; and (4.) (page 206), a table showing the mean annual number of paupers of all classes, and of adult able-bodied paupers in each of the parochial years from 1849 to 1882, both inclusive. For the purposes of the latter Table the mean annual number of paupers is computed on the July and January enumerations of each parochial year.

Pauper returns for the 1st July 1882.

These statistics, it will be observed, include pauper returns for the 1st of July 1882, which will form materials for ascertaining the mean annual number of

paupers for the parochial year 1883. On reference to these it will be found that there was a diminution as compared with the 1st of July 1881 in the in-door paupers of 1,657, or nearly 1 per cent.; in the out-door paupers of 10,415, or more than 1·7 per cent.; and in the adult able-bodied paupers of 5,193 or 5·3 per cent.

Pauper lunatics.

In our previous Reports we have drawn attention to the continuous increase which has taken place of late years in the number of pauper lunatics who are relieved out of the poor rate. On the 1st of January 1872 these paupers amounted to 50,135. On the corresponding day in 1882 the number was 65,319. The increase, therefore, comparing the two years was 15,184, or 30·3 per cent. From the following Table, for the figures in which we are indebted to the Annual Reports of the Commissioners in Lunacy, it will be seen that although the greater part of this increase took place in the number of insane paupers chargeable on the poor rate in county and borough lunatic asylums, there was also a considerable increase in the numbers in workhouses, registered hospitals, and licensed houses, while there was a diminution in the numbers residing with relatives, or in lodgings or boarded out:—

IX.—All England.

On the 1st January.	Insane Paupers chargeable to the Poor Rates in:—				Total.
	County or Borough Lunatic Asylum.	Registered Hospital or Licensed House.	Workhouse.*	Residing with Relatives or in Lodgings or Boarded out.	
1872	27,685	1,406	13,608	7,436	50,135
1873	28,411	1,581	14,343	7,070	51,405
1874	29,297	1,727	15,018	6,839	52,881
1875	30,497	1,842	15,376	6,856	54,571
1876	31,973	1,507	15,509	6,526	55,515
1877	33,432	1,439	16,038	6,312	57,221
1878	35,553	910	16,265	6,214	58,942
1879	36,627	1,303	16,005	6,230	60,165
1880	37,815	1,335	16,464	5,980	61,594
1881	39,128	1,458	16,811	6,127	63,524
1882	40,501	1,729	16,976	6,113	65,319

* The imbecile paupers chargeable to the Metropolitan Common Poor Fund who were maintained in the Caterham, Leavesden, and Darenth Asylums are represented in this column.

In addition to the paupers enumerated in the above Table, there are pauper lunatics who are chargeable to the county rates, or to the borough funds. In 1882, these amounted to 1,770, so that the total number of pauper lunatics for that year was in fact 67,089.

It has been suggested that the increase of late years in the number of pauper lunatics in asylums and licensed houses is due, to a considerable extent, to the effect of the Government subvention of 4*s*. a week for paupers in these establishments, and that the subvention has induced Boards of Guardians in many cases to send to Asylums paupers, who might be sufficiently cared for at a less expense in the workhouse. It will, however, be observed from the above Table that the increase in question has been accompanied by a considerable increase in the number of pauper lunatics in workhouses. The subvention was first paid in the parochial year 1875. It will, therefore, be well, for the purpose of gauging its effect in the above respect, to compare the number of pauper lunatics in asylums and licensed houses, and the number of the insane poor in workhouses on the 1st of January 1874, *i.e.*, before the grant was given, with the corresponding numbers on the 1st of January 1882.

On the 1st of January 1874 the number of insane paupers chargeable to the poor rate in asylums and licensed houses was 31,024, and the number in workhouses 15,018. On the 1st of January 1882 these numbers had respectively increased to 42,230 and 16,976. The increase in the number of insane paupers in workhouses was 13 per cent.

We may mention that it appears from a recent Parliamentary Return, in which the numbers of the pauper lunatics in 1874 and 1881 are contrasted, that in 76 of the Unions in England and Wales the number of these lunatics was the same in the two years; while in 314 there was an increase, and in 259 only a decrease, in the latter year as compared with the former. In the great majority of the Unions in which the decrease took place, it was comparatively small, ranging in 201 of these from 1 to 5, and in 46 from 6 to 10. In 12 Unions only was there a decrease of more than 10 in the number of these paupers in the workhouse.

Cost per head for relief in 1872 and following decade.

The cost per head for relief to the poor has a tendency to increase as the total number of recipients diminishes,

irrespective of any difference arising from variations in the price of provisions or of clothing. This no doubt to some extent arises from the fact that the proportion, which the in-door paupers bear to the out-door, is constantly increasing. The following Table shows the average annual cost per head on the mean number of paupers of all classes, for each of the years from 1872 to 1882, both inclusive :—

X.—All England.

Parochial Year.	Mean Number of Paupers of all Classes.	Total Cost of Relief to the Poor.	Cost per head on Mean Number of Paupers.
		£	£ *s.* *d.*
1872 - -	977,200	8,007,403	8 3 11
1873 - -	883,688	7,692,169	8 14 1
1874 - -	827,446	7,664,957	9 5 3
1875 - -	800,914	7,488,481	9 7 0
1876 - -	749,476	7,335,858	9 15 9
1877 - -	719,949	7,400,034	10 5 7
1878 - -	729,089	7,688,650	10 10 10
1879 - -	765,455	7,829,819	10 4 7
1880 - -	808,030	8,015,010	9 18 5
1881 - -	790,937	8,102,136	10 4 10
1882 - -	788,289	8,232,472	10 8 10

It will be observed that, comparing 1872 with 1882, the cost increased from 8*l.* 3*s.* 11*d.* to 10*l.* 8*s.* 10*d.* or more than 21 per cent.

Cost per head for out-door only in 1872 and following decade.

The difference is smaller when the out-door paupers alone are taken into account. As the cost of paupers in asylums and licensed houses does not enter into the expenditure for out-door relief in the poor rate returns, though these paupers are included in the out-door paupers in the pauper returns, it is necessary, in order to ascertain the average annual cost per head on the mean number of out-door paupers to make a deduction in respect of the paupers maintained in asylums and licensed houses.

In the following Table this adjustment has been effected :—

XI.—All England.

Parochial Year.	Mean Number of Out-door Paupers.	Lunatics in Asylum or registered Hospital, &c. on 1st January in each year.	*Net* mean Number of Out-door Paupers.	Cost of Out-door Relief.	Yearly cost per Head on Mean Number of Out-door Paupers.
				£	£ s. d.
1872	828,000	29,091	798,909	3,583,571	4 9 8½
1873	739,350	29,992	709,358	3,279,122	4 12 5½
1874	683,739	31,024	652,715	3,110,896	4 15 3½
1875	654,114	32,339	621,775	2,958,670	4 15 2
1876	606,392	33,480	572,912	2,760,804	4 16 4½
1877	570,338	34,871	535,467	2,616,465	4 17 8¾
1878	569,870	36,463	533,407	2,621,786	4 18 3¾
1879	598,603	37,930	560,673	2,641,558	4 14 2¾
1880	627,213	39,150	588,063	2,710,778	4 12 2¼
1881	607,065	40,586	566,479	2,660,022	4 13 11
1882	604,915	42,230	562,685	2,626,385	4 13 4

From the above Table it will be seen that, comparing 1872 with 1882, the average annual cost increased only from 4*l.* 9*s.* 8½*d.* to 4*l.* 13*s.* 4*d.*, or about 4 per cent.

Vagrants.

The mean number of vagrants relieved by the guardians during the year 1882 was smaller than in either of the two preceding years, but considerably larger than in any other year of the decade.

The following Table gives the number of vagrants relieved on the 1st of July and 1st of January in every parochial year from 1872 to 1882, and the mean number for each year.

XII.—All England.

Parochial Year.	Vagrants relieved by the Guardians on the :—		Mean Number for the Year.
	1st July.	1st January.	
1872 - -	4,293	3,378	3,836
1873 - -	2,372	3,027	2,700
1874 - -	2,485	3,089	2,787
1875 - -	3,299	2,235	2,767
1876 - -	3,202	3,294	3,248
1877 - -	3,367	4,173	3,770
1878 - -	3,323	5,108	4,216
1879 - -	3,632	4,654	4,143
1880 - -	7,665	5,914	6,789
1881 - -	7,742	6,215	6,979
1882 - -	6,461	5,767	6,114

Poor law expenditure and pauperism in the Metropolis.

In accordance with our usual practice we will now proceed to give some statistics of poor law expenditure and pauperism in the Metropolis apart from the general statistics of the whole country.

The administration of relief to the poor in the Metropolis is distinguished from the administration of relief in the other parts of the Kingdom by the existence of the Common Poor Fund, through the agency of which the poorer Unions are aided by contributions from the richer ones. The items of expenditure, in respect of which these contributions are paid, will be found on reference to page xxx, where some account is given of the expenses, which were borne by the fund during the year ended at Michaelmas 1881.

Common Poor Fund in 1872 and following decade.

The following Table shows the total expenditure on the relief of the poor in the Metropolis, and the amount charged on the Common Poor Fund in each parochial year from 1872 to 1882. In this and the two subsequent tables the amount of the expenditure is given as "adjusted;" that is to say, the amount under this head

in each Table does not represent the total of the sums actually expended in relief in each Union during the year, but the total of such sums after adding thereto, or deducting therefrom, as the case may be, the contributions made by or to the Union to or from the Common Poor Fund.

XIII.—The Metropolis only.

Parochial Year.	Total Relief to the Poor. "Adjusted."	Common Poor Fund.	
		Amount charged on Fund.	Ratio to Total Relief.
	£	£	Per cent.
1872 - -	1,756,929	679,099	38·7
1873 - -	1,630,886	668,716	41·0
1874 - -	1,633,182	687,855	42·1
1875 - -	1,588,709	682,126	42·9
1876 - -	1,618,822	683,392	42·2
1877 - -	1,695,590	661,913	39·1
1878 - -	1,757,183	731,831	41·6
1879 - -	1,806,637	762,554	42·2
1880 - -	1,817,972	769,648	42·3
1881 - -	1,907,155	815,001	42·7
1882 - -	2,090,753	877,007	41·9

From this Table it will be seen that the proportion which the Common Poor Fund bore to the total "adjusted" expenditure in the year 1882, though higher by 3·2 per cent. than it was in 1872, was approximately the average proportion which the fund bore to the expenditure during the ten years. Although, therefore, the poor law expenditure in the Metropolis has grown considerably during the decade, the pecuniary benefits, which the poorer Unions of the Metropolis as a whole have received from the richer ones through the medium of the Fund, have increased in much the same proportion.

The following Table shows the amount of the assistance which was thus given during the past year to the

Assisted Unions.

17 Metropolitan Unions, which most largely benefited by these contributions. Their total local expenditure in relief was 1,216,265*l.*; the sum received in reduction of the burthen was 185,577*l.*, and consequently the adjusted relief was 1,030,688*l.*, which was the ultimate charge for relief borne by the assisted ratepayers.

XIV.—The Metropolis.—Assisted Unions.

Unions Assisted.	Local Cost of Relief.	Amount of Assistance through the Common Poor Fund.	"Adjusted" Relief borne by Ratepayers of the Union.
	£	£	£
Chelsea	46,758	7,341	39,417
St. Pancras	119,975	3,918	116,057
St. Giles and St. George, Bloomsbury.	40,991	6,218	34,773
Holborn	134,825	25,848	108,977
Shoreditch	68,451	11,047	57,404
Bethnal Green	59,166	21,405	37,761
Whitechapel	47,809	13,000	34,809
St. George-in-the-East	39,807	15,864	23,943
Stepney	42,039	6,726	35,313
Mile End Old Town	39,734	6,545	33,189
Poplar	72,525	7,482	65,043
St. Saviour, Southwark	112,358	25,245	87,113
St. Olave, Southwark	78,862	6,618	72,244
Lambeth	117,703	7,438	110,265
Camberwell	68,755	3,160	65,595
Greenwich	75,369	8,938	66,431
Woolwich	51,138	8,784	42,354
	1,216,265	185,577	1,030,688

Cost of relief in 1872 and following decade.

It will be observed from the above figures that the proportionate amount of assistance thus received from the Fund varied greatly in the different Unions assisted. For example, the contributions obtained from the Fund by St. Pancras and Camberwell respectively represented less than a thirtieth and a twentieth part of the local cost of relief, whereas both in Bethnal Green and St. George-in-the-East more than one-third of the local cost was paid for out of the Fund.

The next Table, which gives the population, and "adjusted" expenditure on relief in the Metropolis during each of the years from 1872 to 1882, the rate per head on the population and the average rate in the £ on the rateable value of the property liable to contribute to the poor rate, shows the extent to which the pecuniary burden of the relief of the Metropolitan poor has fluctuated in each year of the decade. It will be seen from it that the expenditure, which fell from 1,756,929*l.* in 1872 to 1,588,709*l.* in 1875, has risen steadily since the latter year to 2,090,753*l.* in 1882; and that this growth, though more rapid than the increase in the population during the interval, has been slightly surpassed by the increase in the rateable value; the result being that the average rate in the £, which was 1*s.* 6½*d.* in 1875 was only 1*s.* 6¼*d.* in 1882. Comparing 1882 with 1872, there was a decrease of 3*d.* in the £ in the average rate required in the Metropolis for the relief of the poor.

XV.—The Metropolis only.

Parochial Year.	Population.	Relief to the Poor. "Adjusted."	Rate per Head on Population.	Rate in £ on Rateable Value.
		£	*s.* *d.*	*s.* *d.*
1872	3,311,298	1,756,929	10 7¼	1 9¼
1873	3,356,073	1,630,886	9 8¾	1 7½
1874	3,400,701	1,633,182	9 7¼	1 7¼
1875	3,445,160	1,588,709	9 2¾	1 6½
1876	3,489,428	1,618,822	9 3¼	1 6½
1877	3,533,484	1,695,590	9 7¼	1 5¾
1878	3,577,304	1,757,183	9 10	1 6
1879	3,620,868	1,806,637	9 11¾	1 6¼
1880	3,664,149	1,817,972	9 11¾	1 5¾
1881	3,814,571	1,907,155	10 0	1 6¼
1882	3,893,272	2,090,753	10 9	1 6¼

A considerable amount of the increased expenditure during the decade is attributable to the increase in the contributions which the Unions have been called upon to make to the expenses incurred by the Metropolitan Asylum Board.

Expenditure of Metropolitan Asylums Board.

The following are the annual amounts of these contributions from 1872 to 1882 :—

Parochial Year.	£	Parochial Year.	£
1872	197,913	1878	253,407
1873	118,675	1879	256,202
1874	135,923	1880	252,062
1875	153,777	1881	250,311
1876	168,688	1882	386,125
1877	188,344		

In-door and out-door relief in the Metropolis in 1872 and following decade.

The statistics relating to in-maintenance and out-relief and to the number of in-door and out-door paupers in the Metropolis contrast very favourably with those for the remainder of the country, and prove the satisfactory working in this respect of the Metropolitan Poor Amendment Act, 1869, under which a large portion of the cost of the in-maintenance was made repayable out of the Common Poor Fund. In 1872, the cost of the in-maintenance was 433,215*l.* and that of the out-relief was 374,736*l.* In 1882, while the in-maintenance had increased to 569,992*l.*, the out-relief had fallen to 198,757*l.* In other words an increase of 136,777*l.* in the in-maintenance had been accompanied by a decrease of 175,979*l.* in the out-door relief, the result being a net decrease of 39,202*l.* on the sum of the two items, notwithstanding the growth of the population. In the meanwhile the proportion which the out-door relief bore to the aggregate of the two items had fallen from 46·4 per cent. to 25·9 ; as will be seen on reference to the following Table.

XVI.—The Metropolis only.

Parochial Year.	In-maintenance.	Out-door Relief.	Total of In- and Out-door Relief.	Ratio of Out-door Relief to Total.
	£	£	£	Per cent.
1872	433,215	374,736	807,951	46·4
1873	444,909	325,105	770,014	42·2
1874	488,798	309,441	798,239	38·8
1875	466,485	277,281	743,766	37·3
1876	463,700	245,444	709,144	34·6
1877	490,713	225,291	716,004	31·5
1878	516,219	213,803	730,022	29·3
1879	515,605	201,673	717,278	28·1
1880	513,775	198,422	712,197	27·9
1881	550,739	198,282	749,021	26·5
1882	569,992	198,757	768,749	25·9

The metropolitan pauper statistics for the decade are even more satisfactory. The mean number of paupers in the Metropolis fell from 135,703 in 1872 to 100,323 in 1882, being a diminution of more than 26 per cent. This result was brought about by a reduction of 48,137 or more than 49 per cent. in the mean number of out-door paupers, accompanied by an increase of 12,757 or 33 per cent. in the mean number of in-door paupers. The extent of the fluctuation in the numbers in each year is shown by the following Table.

In-door and out-door paupers in the Metropolis in 1872 and following decade.

XVII.—The Metropolis only.

Parochial Year.	Mean Number of Paupers.*			Ratio per 1,000 of Population.
	In-door.	Out-door.	Total.	
1872	38,379	97,324	135,703	41
1873	38,063	80,904	118,967	35
1874	39,164	75,845	115,009	34
1875	39,882	69,437	109,319	32
1876	39,704	58,857	98,561	28
1877	41,862	52,574	94,436	27
1878	44,082	51,118	95,200	27
1879	45,444	49,121	94,565	26
1880	48,251	50,665	98,916	27
1881	50,175	48,864	99,039	26
1882	51,136	49,187	100,323	26

* Computed on Returns of 1st July and 1st January.

The total Poor Law expenditure which has been equally distributed over the Metropolitan Area, from the passing of the Metropolitan Poor Act, 1867, to Lady-day 1881, amounted to 8,579,217*l.*, and the total of such expenditure which was similarly dealt with during the past year, namely, that for the two half-years ended at

Metropolitan Common Poor Fund.

Michaelmas 1881 was 848,360*l.* The several items composing the latter amount are the following:—

	£	£
PAUPERS:		
Maintenance of In-door paupers - -	215,574	
„ Pauper children - -	149,835	
„ Insane poor - -	185,985	
„ Paupers suffering from small-pox or fever -	30,894	
School fees for out-door pauper children under the Education Acts - - -	1,854	
Vagrants.—Expenses under the Houseless Poor Act - - - -	12,223	
		596,365
MEDICAL RELIEF:		
Medicine and medical and surgical appliances -		9,994
PAID OFFICERS:		
Salaries - - - - -	169,596	
Rations - - - - -	42,131	
Compensation for loss of office - -	3,533	
		215,260
TOTAL for purposes immediately connected with the Relief of the Poor -	—	821,619
REGISTRATION FEES - - -	10,730	
VACCINATION FEES AND EXPENSES - -	16,011	
		26,741
TOTAL - - -		848,360

During the year as a result of this distribution a sum of 199,028*l.* was paid out of the Metropolitan Common Poor Fund to the poorer Unions and Parishes in the Metropolis, whilst 197,402*l.* was contributed to the Fund.

Tables are appended giving detailed information with regard to the expenses incurred by the Guardians of each Union and Parish in the Metropolis, and the sums contributed to or received by them out of the Fund. (Appendix, p. 334, *et seq.*)

Metropolis. New buildings.

We will next proceed to give some account of what has been done by the Poor Law Authorities of the Metropolis during the year, as regards the provision of additional accommodation for the in-door poor. We may mention, in passing, that in authorising the borrowing of money for defraying expenses for fittings, furniture, and engineering works in connexion with Poor

Law Establishments, we, as a rule, require that such money shall be repaid within periods not exceeding 10 or 15 years instead of within the maximum period of 30 years usually allowed in respect of new structures.

Workhouses.

In the parish of Chelsea buildings are in progress with the view of supplying further in-door accommodation, and premises adjoining the present workhouse have been acquired for this purpose.

For the St. George's Union we have approved of plans for a small workhouse, with vagrant wards attached, in the vicinity of Buckingham Palace Road, in lieu of the present workhouse in Mount Street, the lease of which will shortly expire.

In the Hackney Union the rapid increase in the population has involved the necessity of further workhouse accommodation. We have approved of plans for the erection, at the Hackney Workhouse, of additional blocks for 450 male adults, and new Receiving Wards. When these buildings have been completed, the present establishment will be used exclusively for females.

The Guardians of the parish of Hampstead have found it necessary to provide at their workhouse further accommodation for 78 inmates, which will be appropriated for the sick.

The additional workhouse accommodation in the Holborn Union, to the necessity for which we drew attention in our last Report, has not yet been provided, and the question is still under the consideration of the Guardians.

The Guardians of St. Mary, Islington, have entered upon the occupation of the workhouse at Holloway formerly belonging to the City of London Union.

Certain premises at Notting Hill belonging to the parish of Kensington have, with our consent, been converted into a workhouse exclusively for able-bodied men, and the Guardians receive there some of this class of paupers chargeable to other Parishes or Unions.

Extensive additions to the workhouse of the parish of Lambeth were completed in the autumn. The workhouse will now accommodate 1,255 inmates.

In consequence of the serious deficiency of workhouse accommodation in the parish of St. Pancras, the Guardians determined to acquire property adjacent to the present building. In order to obtain this property it

was found necessary to promote a Bill in Parliament giving the Guardians compulsory powers of purchase. The Bill passed during the last Session and plans for additional workhouse buildings are receiving our consideration.

In the St. Saviour's Union no active measures have yet been adopted for the purpose of utilising the newly acquired site at Champion Hill. The in-door accommodation for the Union has for some time been the subject of correspondence with the Guardians.

The Guardians of the Wandsworth and Clapham Union have arranged to purchase 10 acres of land at 1,000*l.* per acre for the purpose of extending the present accommodation for in-door poor. The arrangements for meeting the increased wants of the Union in this respect are still under the consideration of the Guardians.

Infirmaries and Sick Asylums.

Of the 30 Metropolitan Poor Law areas there are now only 3, viz., Bethnal Green, Hampstead, and Lewisham, in which steps have not been taken to provide the separate infirmaries for the sick contemplated by the Metropolitan Poor Act, 1867.

We have approved during the year of plans for an Infirmary for patients in the Fulham Union. It is estimated that the cost of building, fitting, and furnishing will be about 56,000*l.*

The new Infirmary for the hamlet of Mile End Old Town is now completed and will shortly be opened. It will accommodate 453 patients.

Some difficulty having arisen in regard to the sum to be paid by the Guardians of St. Pancras to the Managers of the Central London Sick Asylum for the Sick Asylum at Highgate, we undertook at the request of the two Authorities to act as Arbitrators in the matter, and we now anticipate that no further delay will take place in the transfer of the Asylum.

Schools.

In the summer of last year the Managers of the South Metropolitan School District opened their newly acquired premises at Witham, Essex, (formerly the workhouse of the Witham Union) as a branch School for orphans and deserted children between the ages of 7 and 12.

The construction by the Managers of the same School District of the new School at Sutton to be appropriated for infants is progressing.

The large increase of the population of the Unions comprising the North Surrey School District, and the consequent pressure on the school accommodation, led us to issue an Order separating the Richmond Union from the District. The existing school premises are, however, still inadequate for the reception and education of all the pauper children of the District. We are in correspondence with the Managers as to the steps to be taken in order to provide the additional accommodation required.

The Managers of the Kensington and Chelsea School District have obtained premises at Hammersmith for the "Branch" or "Probationary" School referred to in our last Report. The premises will, when certain proposed alterations have been carried out, accommodate 120 children.

We have approved of a proposal of the same Managers to erect three additional cottages at the Banstead School.

The new School infirmary for the Holborn Union has been completed.

We have approved of plans for a new School for the parish of Lambeth for 576 boys and girls on land adjoining the present school. The existing school buildings will be appropriated to the reception of infants and the two establishments will be under separate administration.

Casual pauperism in the Metropolis.

In the Appendix pp. 216, 218, and 219 will be found Tables containing statistics of Metropolitan Casual Pauperism for the years 1877, 1880, and 1882. These Tables show the variation during each of those years in the average nightly number of admissions from month to month in respect of each District and of the whole Metropolis, with particulars as to the proportion of men, women, and children, and the number of refusals of admission either for want of room or on account of the applicant having money, or from other causes. It is satisfactory to find that of the nightly average of 807 casual paupers during the year 1882 only 33 were children. The highest nightly average number of children in any of the past 10 years has not exceeded 42 for the whole Metropolis.

Comparison of "separate berth" wards and "associated" wards.

The Table at p. 216 of the Appendix gives the number of admissions to certain Wards before and after the "separate berth" system was adopted.

Uniformly strict enforcement of regulations is a necessity.

Attention may be drawn to the entries in the Table at pp. 219–221 of the Appendix in respect of the Mile End Ward and the Fulham Ward as illustrating the necessity for strict enforcement of the regulations with regard to casual paupers. At Mile End, commencing about April 1880, the accommodation was not sufficient to admit of the paupers identified as liable to detention being detained in accordance with the regulations till the morning of the 3rd day after admission. The numbers at once rose, and, in place of an average nightly total of admissions of 33 in March 1880, there was an average of 53 in April 1880. Whilst in the year 1877 the average nightly number of admissions was 22, the number was 44 in the year 1880, and 56 in the year 1882. At Fulham a change in supervision occurred in July 1881, and the regulations were then more strictly enforced, and a task of work consisting of stone-breaking was required to be performed. The numbers immediately began to decrease, and, as compared with a nightly average of 28 in the year 1880, there was an average of 13 in the year 1882.

Uniformity of practice in regard to the treatment of casual paupers is of great importance. A slight improvement of the diet is found to attract increased numbers, and preference is given to Wards where the task of work is oakum picking and not stone breaking

Convictions of casual paupers.

In the Appendix (p. 222) will be found a Table showing for each of the last 10 years the number of cases in which casual paupers detained in the wards have been prosecuted and sent to prison for various offences. On reference to this table it will be seen that the offences in respect of which the majority of the convictions have taken place have been the neglect or refusal to work, and the tearing up of their clothes by the casuals.

Small-pox in Casual Wards.

Our attention having been drawn during the year to the occurrence of certain cases in which persons had been admitted into and discharged from casual wards whilst suffering from small-pox, we deemed it advisable

to issue a circular to the Metropolitan Unions with a view to prompt measures being taken for the isolation and proper treatment of any casuals suffering from illness. A copy of this Circular will be found at p. 8 of the Appendix.

Location of Metropolitan paupers and cost of establishments.

The establishments under the control of the Metropolitan Poor Law Authorities, the average number of inmates relieved in them, and the totals of the several items of expenditure incurred in respect of each class of institution during the year ended Lady-day 1882, are given in the following table:

	Average No. of Inmates daily.	Expenditure.									
		Flour and Bread.	Meat.	Milk.	Beer.	Wine and Spirits.	Total of Provisions for Inmates.	Clothing.	Officers' Salaries, Rations, and Uniform.	Total Expenditure excluding Loan Repayments.	Loan Repayments and Interest.
		£	£	£	£	£	£	£	£	£	£
38 Workhouses } 1 Infirmary }	24,052	38,979	88,544	13,516	5,051	3,637	208,164	28,677	64,351	414,759	55,458
19 Schools	11,098	22,647	30,318	15,743	63	352	88,323	29,888	69,837	254,146	36,115
20 Infirmaries	8,567	13,224	45,429	13,972	2,339	3,683	106,837	9,599	85,388	284,436	52,325
6 Infectious Hospitals }	878	1,568	5,370	2,952	629	1,379	18,046	7,272	38,027	113,285	18,948
4 Imbecile Asylums }	4,711	9,277	21,412	3,068	4,246	912	56,273	15,684	26,781	138,880	35,578
88* Total	49,306	85,695	191,073	49,251	12,328	9,963	477,643	91,120	284,384	1,205,506	198,424

* Excluding 24 casual wards and two or three temporary establishments; as the "Atlas" Hospital Ship and the Small-pox Convalescent Camp at Darenth.

The Appendix (p. 223, *et seq.*) contains further details of the expenditure and the prices paid for various articles used at each establishment during the year. It will be observed that the prices paid for articles vary considerably in the several establishments.

Metropolitan paupers in other than Poor Law establishments

We referred in our last Report to the Metropolitan paupers maintained in schools certified by us under 25 & 26 Vict. c. 43. The majority of these paupers are maintained in the Schools established by the Westminster Roman Catholic Diocesan Authorities. After the passing of the Poor Law Amendment Act, 1882, application was made to us on behalf of the Managers of those Schools to fix under that Statute the maximum rate of payment for children sent to the certified Schools in question. We decided that 6*s.* per week was a reasonable rate of payment. This decision enables

the Guardians to pay a higher rate than was previously permissible.

Occupations of children placed out from Metropolitan schools.

In the Appendix (p. 277), will be found a return showing the occupations of children placed out from the Metropolitan Pauper Schools during the year 1882. It appears from this return that of 746 boys placed out during the year, 155 entered the Navy, and 109 the Mercantile Marine, while 151 became Army bandsmen, 34 domestic servants, 60 bakers, 54 shoemakers, 12 hair dressers, 9 carpenters and joiners, and 9 milkmen. The remainder entered various other employments the nature of which is in each case shown in the return. Of the girls 453 became domestic servants.

Industrial training of children.

We have in several cases assented to children above the age of 13 years who have passed the 4th standard of the Code of the Education Department being withdrawn from School, except for a certain number of hours weekly, in order that they may receive more industrial training. We require that, in these cases, the arrangements for mental instruction shall be such as to ensure that the children are kept up to the 4th standard while they remain in the School.

Subscriptions to public hospitals, &c.

Subscriptions to the amount of about £800 per annum are now paid by Metropolitan Boards of Guardians to various Public Hospitals and certain other institutions, such as the Metropolitan Association for befriending young Servants.

In some Unions the Guardians have found it advisable to enter into arrangements with nursing associations to supply, from time to time, the requisite staff of nurses for the infirmary.

Metropolitan Asylum District. Imbecile asylums.

Two new blocks of Infirmary buildings at the Darenth Asylum for Adult Imbeciles were completed and occupied during the year. We have also approved of plans for the erection of a Recreation Hall in connexion with this Asylum.

Our attention was drawn during the year to the fact that several children between two and three years of age had been admitted into the Asylum for Imbecile Children at Darenth. It appeared to us that no trustworthy judgment could be formed as to the intellectual con-

dition of children of such tender age, and we accordingly issued a Circular to the Metropolitan Boards of Guardians on the subject, in which we informed them that in similar institutions the earliest age of admission had been fixed at seven years, but that having regard to the inconvenience that might result from the detention in a workhouse of children mentally afflicted, we considered that children of five years old might, if their condition required it, be properly sent to Darenth, but that prior to that age they should be retained in the Workhouse. A copy of this Circular appears in the Appendix (p. 12).

Infectious hospitals.

In our last Report we gave some account of the small-pox epidemic of 1881, and mentioned that on the 1st of December 1881 the number of small-pox cases in the hospitals of the Metropolitan Asylum Board had fallen to 477. In the beginning of 1882 the number was 500; at the end of June it had become 246, and at the end of the year 79.

When sufficient time had elapsed to show that the epidemic had ceased, we consented to a proposal to discontinue further admissions of small-pox patients into the Hospital Ship "Atlas," moored at Deptford Creek. The "Atlas" and the "Endymion" were thereupon removed down the river to an isolated position selected by the Thames Conservancy Board at the lower end of Long Reach.

In September there was an increase in the number of scarlet fever patients, and the Fulham and Hampstead Hospitals were opened for cases of fever. The spread of the disease did not, however, long continue, and at the end of the year a comparatively normal number of inmates was in the hospitals.

Ambulance station.

An action was brought during the year against the Managers with the object of restraining them from continuing to use the Ambulance Station referred to in our last Report. The use of the premises for the purposes of an Ambulance Station was held to be contrary to the terms of the agreement between the owner and the lessee by whom the premises were sub-let to the Managers. The Managers arranged, however, with the owner of the property to continue temporarily the use of the premises as an Ambulance Station.

District medical officers.

At the close of the year 1882 there were 154 District Medical Officers in the Metropolis.

The Table inserted at p. 214 of the Appendix shows that the total amount of the Salaries payable to these Officers was £17,568 per annum.

The total amount of the Fees paid to them during 1882 was £1,759.

The average remuneration of each Officer during 1882 was at the rate of £125 10*s.* per annum.

The total number of Orders for medical relief was 113,354, and the average number of Orders per Medical Officer was 736.

The average remuneration per Order was 3*s.* $4\frac{3}{4}$*d.*

Time for which orders are available.

The absence of uniformity as to the period for which Medical Orders are available renders it difficult to form a comparison between the different Metropolitan Unions in respect of the work of the District Medical Officers. It would probably be an advantage if all Orders for Medical Relief were granted by the Guardians for a uniform period of one month, which is the period at present adopted for this purpose in many Unions.

Dispensaries.

Dispensaries are about to be established for three of the five Medical Districts in the Fulham Union. There will then remain only one Metropolitan Union (Lewisham) and one Metropolitan Parish (Hampstead) in which section 38 of the Metropolitan Poor Act, 1867, has not been acted on.

Relieving officers.

The total number of Relieving Officers in the Metropolis was 139 at the close of last year exclusive of Assistant Relieving Officers, Pay Clerks, Out-Relief Storekeepers, &c. We have adopted a rule with reference to the salaries payable to Relieving Officers under which the commencing salary may be £150 rising by quinquennial increments of £10 to a maximum of £180 per annum.

Work of relieving officers.

The Table at p. 212 of the Appendix shows that the number of applications received for Relief in the Metropolis during the year 1881 was 334,030. Of the total Relief granted £152,547 was in money and £38,861 only in "kind". This shows an average disbursement per Relieving Officer of £1,097 yearly in money and

£279 in kind, giving an average weekly disbursement per Relieving Officer of £21 2*s.* in money, and £5 7*s.* in kind. The proportion between the amount of Relief granted in money and in kind varies greatly in the several Unions and Parishes. The proportion in the parish of St. Pancras was, during the year 1881 :—

£271 16*s.* weekly in money.
£60 5*s.* „ in kind.

In Camberwell the average weekly amount during the same period was :—

£23 8*s.* in money.
£66 14*s.* in kind.

In Shoreditch it was :—

£19 9*s.* in money.
£49 8*s.* in kind.

In-door relief. New buildings.

In connexion with the provision of increased accommodation for in-door poor in Unions outside the Metropolis, we have approved of plans for new infirmaries at the West Bromwich, Canterbury, Epsom, Leigh, and Mansfield Union Workhouses and large additions to the infirmaries belonging to the Tenterden Union and the Parish of Stoke-upon-Trent. We have also approved of plans for important extensions of the Workhouses of the Hexham and Newcastle-upon-Tyne Unions and for new Imbecile Wards at the Portsea Island Union Workhouse, and new Vagrant Wards at the Workhouse belonging to the Fylde Union. We have further sanctioned plans for new school buildings at the Thingoe Union Workhouse, together with plans for new offices for the Guardians of the Parish of Birmingham and of the Leicester Union.

Pauper education.

We publish in the Appendix (p. 74, *et seq.*) reports which we have received from Mr. Mozley, Mr. Holgate, and Mr. Davies, Inspectors of Workhouse Schools, upon the state of the schools in their respective districts. We also publish a series of Tables showing the results of the examination of the children in the schools of the district in charge of Dr. Clutterbuck, Inspector of Workhouse Schools.

School attendance.

In the Appendix (p. 244) a statement will be found showing the daily average number of children attending Workhouse and separate Union or Parochial Schools in

England and Wales, as well as the number attending District Schools during the half year ended at Lady-day 1882; also the amount of money paid from the Parliamentary grant in respect of the salaries of the schoolmasters and schoolmistresses for the year ended at the same date. The following is a summary of this statement:—

AVERAGE daily number of children attending *Workhouse* Schools and *separate Union or Parochial* Schools during the half year ended at Lady-day, 1882:—

Boys,—			
Under 10 years of age	7,692		
Above 10 years of age	7,249		
		14,941	
Girls,—			
Under 10 years of age	7,430		
Above 10 years of age	5,250		
		12,680	
Total			27,621

AVERAGE daily number of children attending *District* Schools during the same period:—

Boys,—			
Under 10 years of age	1,960		
Above 10 years of age	2,156		
		4,116	
Girls,—			
Under 10 years of age	1,345		
Above 10 years of age	1,712		
		3,057	
Total			7,173
Boys,—Above 10 years of age in training ship "Exmouth"			541
Total number of Children attending *Workhouse, separate Union* and *Parochial,* and *District* Schools			35,335

	£	*s.*	*d.*
The amount paid to Boards of Guardians and Managers out of the Parliamentary grant in respect of the salaries of Workhouse and District School teachers for the year ended at Lady-day, 1882	38,769	3	11

Casual paupers.

An important Act was passed during the year to render more stringent the law relating to the detention of casual paupers. Under section 5 of the Pauper Inmates Discharge and Regulation Act, 1871, a casual pauper

could not discharge himself from a casual ward before 11 o'clock in the morning on the day following his admission, nor before he had performed the work prescribed for him. Moreover, if he had been admitted on more than two occasions during one month into any casual ward of the same Union he was not entitled to discharge himself before 9 o'clock in the morning of the third day after his admission. Under the new Act a casual pauper cannot discharge himself before 9 o'clock in the morning of the second day following his admission, nor before he has performed the work prescribed for him; and if he has been admitted on more than one occasion during one month into the casual ward of the same Union, he cannot discharge himself before 9 o'clock in the morning of the fourth day after his admission. In computing the number of days during which a casual pauper may be detained, Sunday is not included. The Act did not come into force until the commencement of the present year, but we called attention to it in the Circular which was issued on the 31st August 1882 as to the Poor Law Legislation of the year (see Appendix, p. 45), and subsequently we issued a General Order prescribing regulations adapted to the new statutory provisions as regards the admission and discharge of casual paupers, their diet, and task of work. The Order was accompanied by an explanatory letter, and we instructed our Inspectors to take an opportunity of conferring with the Boards of Guardians in their respective districts in reference to the carrying out of the Regulations prescribed. The Order and letter will be found in the Appendix, pp. 62 and 64.

Boarding-out orphan and deserted children.

During the year 1882 three new Committees have been formed (one in each of the counties of Herts, Middlesex, and Wilts) under the provisions of the General Order of the 25th November 1870, which prescribes Regulations for the boarding-out of orphan and deserted children beyond the limits of the Unions to which they are chargeable. The number of children so boarded-out and appearing on our List on the 31st December was 698, of whom 91 appear to have been boarded-out during the year.

With a view to assist Boards of Guardians in making arrangements with Boarding-out Committees for the boarding-out, under the Regulations in the above-

mentioned Order, of orphan and deserted children, we have inserted in the Appendix, p. 281, a list of the Committees authorised to act, the Unions in which they are established, and the names and addresses of the Secretaries.

We have no information as to the number of orphan and deserted children boarded-out within the Unions to which they are chargeable.

Poor law conferences.

The Eleventh Annual Central Poor Law Conference took place in London on the 6th December, and during the year Poor Law Conferences were also held for the following Districts:—

For the South Wales District at Merthyr Tydfil on the 3rd February;

For the West Midland District at Malvern on the 2nd and 3rd May;

For the South Midland District at Huntingdon on the 14th June;

For the Northern District at Gilsland on the 8th and 9th August;

For the North Western District at Lancaster on the 6th of October;

For the North Wales District at Corwen on the 13th October.

The principal questions discussed at these conferences were Out-door Relief, Vagrancy, the Supervision of Children in service, Local Taxation and the Extension of Areas for Contributions to the Cost of In-maintenance, Uniformity of Assessment, County Government, the Election of Guardians, Elementary Education, and the Registration of Common Lodging Houses.

Emigration.

During the year 1882 the number of persons to whom assistance to emigrate was afforded by Boards of Guardians was 220. The cost to the poor rate was 781*l.* 4*s.* 6*d.* Of the number referred to 118 went to Canada, 55 to Australia, 38 to the United States, 3 to New Brunswick, 2 to Clarke's Island, 2 to Cape Colony, 1 to South America, and 1 to New Zealand.

Infectious diseases in workhouses.

In the Appendix, page 11, will be found a Circular Letter, which we addressed to Boards of Guardians on the 19th of June 1882 on the subject of infectious diseases in Workhouses. In this Circular we pointed out

the importance of requiring the re-vaccination of the nurses and other persons employed to attend upon small-pox patients, and of taking strict measures to prevent communication between the inmates of the fever wards and those of the workhouse, the neglect of these precautions having to our knowledge in certain cases resulted in the spread of disease. We also requested that, on the occasion of every outbreak of small-pox or any other dangerous infectious disease in a workhouse, the fact should be immediately reported to us by the medical officer, with a statement showing the provision made for the isolation and treatment of the patients, and for preventing the spread of the disease.

Danger from fire in workhouses.

Our attention having been drawn by our Inspectors to the want of appliances in Poor Law Institutions for dealing with an outbreak of fire in its earliest stage, and aiding the escape of the inmates, we issued a Circular to Boards of Guardians on the 14th of March 1882 (of which a copy is contained in the Appendix, page 6) in which we impressed on them the desirability of requiring systematic inspections of the premises to be made by responsible officers for the purpose of seeing that combustible substances are not allowed in dangerous positions, ascertaining the condition of the chimney flues; and ensuring that the various appliances for extinguishing fire are in proper order, that a sufficient supply of water is available, and that the means of communication between the wards occupied by the inmates and the apartments of the chief officers are in working order. We also described the appliances and apparatus which we were advised were the most suitable and handy for extinguishing fires in these institutions and aiding the escape of the inmates, in the event of the ordinary means of exit being cut off.

Pauper interments.

Certain cases having been brought under our notice, where, by reason of the defective nature of the arrangements for the disposition and burial of poor persons dying in workhouses, and the want of proper supervision on the part of the workhouse officers, unfortunate mistakes had occurred in connexion with pauper interments, we addressed a Circular letter to Boards of Guardians on the 22nd of May 1882, drawing their attention to the subject, and suggesting the steps which

in our opinion should be taken to prevent the recurrence of these mishaps. A copy of this Circular will be found in the Appendix, page 10.

Out-door relief to wives of men in Army Reserve.

In consequence of the calling out of the Army Reserve we addressed a Circular Letter on the 30th August 1882 to our Inspectors (Appendix, p. 43) indicating the course which, in our opinion, Boards of Guardians should adopt in dealing with applications for relief from the wives of men in the First Class Army Reserve who had been required to join the colours. We enclosed in this Circular a Memorandum containing extracts from the Regulations of the War Office for the mobilization of the First Class Army Reserve for permanent service, and showing the contributions to be made by soldiers on the Married Roll when on Foreign Service.

Divided parishes.

During the year 1882 inquiries were held under the provisions contained in the Divided Parishes and Poor Law Amendment Act, 1876 (39 & 40 Vict. c. 61.), and the Poor Law Act, 1879 (42 & 43 Vict. c. 54.), with a view of dealing with the detached parts of Parishes in the following Unions:—

Abergavenny.
Aberystwyth.
Banbury and Daventry.
Basford.
Bedminster.
Bideford and Torrington.
Bingham and Basford.
Brackley.
Bradford and Bath.
Brampton.
Buntingford.
Calne and Chippenham.
Cardiff.
Carnarvon.
Cheltenham.
Chesterfield.
Church Stretton and Ludlow.
Clun.
Clutton and Wells.
Conway.
Croydon.
Depwade and Hoxne.
Drayton.
Droitwich.
Dursley and Tetbury.
Glendale.
Guildford.
Hardingstone.
Holsworthy.
Hunslet.
Knaresborough.
Launceston and Stratton.
Loddon and Clavering.
Ludlow.
Maidstone.
Mansfield.
Martley.
Monmouth and Dore.
Newent.
Northleach.
Okehampton.
Potterspury.
Ross.

Rothbury.	Thingoe and Newmarket.
Salford.	Torrington.
Selby.	Towcester.
Stockbridge.	Westbury-on-Severn.
Stow-on-the-Wold.	Wheatenhurst.
Stroud.	Williton.
Tavistock.	Winchcomb.
Tenbury.	Woodbridge.
Tewkesbury (2 inquiries).	York.

In the majority of the above-mentioned cases Orders have been issued dealing with all the detached parts of Parishes in the respective Unions, and the remainder will be dealt with in due course.

We received notices of objection under section 2 of the Divided Parishes and Poor Law Amendment Act, 1876, to five Orders relating to divided Parishes in the Auckland, Doncaster, Durham, Faringdon, Headington, Highworth and Swindon, Rotherham and Wortley Unions, and those Orders consequently became provisional and required confirmation by Parliament. The Orders were included in the Local Government Provisional Orders (Poor Law) Bill, and four of them were confirmed without opposition or alteration. The confirmation of the fifth Order, by which an isolated and entirely detached part of the Township of Ecclesfield, known as the Hamlet of Aldwark, comprised in the Wortley Union, was added to an adjoining Township, viz. Dalton, in the Rotherham Union, was opposed in the House of Commons by the Guardians of the Wortley Union, the Guardians of the Rotherham Union appearing before the Select Committee in support of the Order. The Committee after hearing evidence on both sides decided to confirm the Order without alteration. The Royal Assent was given to the Bill on the 19th of June 1882.

The abolition of the detached parts of parishes will be much furthered by the Divided Parishes and Poor Law Amendment Act, 1882 (45 & 46 Vict c. 58). There were prior to the passing of this Act numerous cases in which a detached part of a parish was entirely surrounded by another parish, and where it was obvious that we could only deal with the detached part by amalgamating it with the parish surrounding it, or by forming it into a separate parish. This we were empowered to

do under the Divided Parishes and Poor Law Amendment Act, 1876; but only by an Order issued after a local inquiry. The Act of 1882 provided that every such detached part situate outside the metropolis, should, after the 25th March 1883, become amalgamated with the surrounding parish, subject to the exception that if the population of a detached part exceeded 300, we might on application constitute such part a separate parish. Shortly after the passing of the Act we issued a circular explaining its provisions, and this will be found in the Appendix, p. 50. It was necessary that any application for the formation of a new parish under the Act should be made to us before the 1st December last. Only three such applications were made, viz., from the parishes of Apsley Guise, Cowley, and Llanbedr-y-Cennin.

Dismissals and resignations of officers.

We insert in the Appendix, p. 342, a statement showing the number of officers whose resignations have been required during the past year on account of irregularities in the discharge of their duties, or who have been dismissed from the offices held by them, in the several unions or parishes in England and Wales, exclusive of the Metropolis.

The following figures show the total number of the officers of the principal classes, and the number dismissed or required to resign :—

	Total Number.	Dismissed or required to resign during the past year.
Clerks - -	624	- 3
Medical officers -	4,053	- 7
Masters of workhouses	650	- 10
Relieving officers -	1,397	- 14

Superannuation allowances.

In the Appendix, p. 344, will also be found a statement showing the number of union or parochial officers to whom, with our consent, superannuation allowances were awarded during the past year.

Audit.

In consequence of the continuance in some of the Audit Districts of the great pressure of work which was referred to in our last Report, and there being no prospect of any abatement, we deemed it advisable that a permanent reduction should be made in the size of some of the Districts. Accordingly, with the approval of the Lords Commissioners of Her Majesty's Treasury,

we re-arranged twelve of the Districts, and created three additional Districts, which are named the Mid-Lancashire, the South West Lancashire, and the Leicestershire Districts, respectively. We appointed to the first-mentioned new District Mr. George Edward Darroch, of Earles Terrace, Kensington; to the second, Mr. George Haslehurst, of Chesterfield; and to the third, Mr. Percy John Hibbert, of Broughton Bank, Grange-over-Sands, Barrister-at-Law.

The following are the Audit Districts as now arranged:—

1. Berkshire and Oxfordshire.
2. Buckinghamshire and Bedfordshire.
3. Cambridgeshire.
4. Cheshire.
5. Cornwall.
6. Devonshire.
7. Durham.
8. Essex.
9. Gloucestershire.
10. Hampshire.
11. Herefordshire and Monmouthshire.
12. Hertfordshire and Middlesex.
13. Kent.
14. North Lancashire.
15. South East Lancashire.
16. Nottingham.
17. Lincolnshire.
18. Metropolitan.
19. Norfolk.
20. Northamptonshire.
21. Northumberland.
22. Shropshire and Worcestershire.
23. Somersetshire and Dorsetshire.
24. Staffordshire.
25. Suffolk.
26. Surrey.
27. Sussex.
28. Warwickshire.
29. Wiltshire.
30. North Yorkshire.
31. South Yorkshire.
32. West Yorkshire.
33. North Wales.
34. South Wales.
35. Mid-Lancashire.
36. South West Lancashire.
37. Leicestershire.

The office of Auditor of the Metropolitan Asylum District having become vacant by the death of Mr. Baylis, we issued an Order prescribing that it shall be the duty of Mr. Hugh Lloyd Roberts, Auditor of the Metropolitan District, to audit the accounts of the Asylum District.

A vacancy having occurred in the Somersetshire and Dorsetshire Audit District, through the resignation of Mr. Household, we transferred to that District Mr. J. Trask, formerly Auditor of the Wiltshire District, and appointed Mr. Edward Stevens, Assistant Auditor in

the Metropolitan District, to the vacant Wiltshire District. We appointed Mr. William Floyd to succeed Mr. Stevens as Assistant Auditor in the Metropolitan District.

We received from the Education Department a copy of a Circular Letter, addressed by them to School Boards, respecting the administration of additional grants under section 97 of the Elementary Education Act, 1870, from which it appeared to be the wish of that department that by Midsummer in each year the accounts of every School Board should be audited up to the preceding Michaelmas. We consequently addressed a Circular Letter to the District Auditors urging them to arrange to complete such Audits by the time named.

With a view of curtailing our correspondence on the Reports which we receive from the District Auditors respecting irregularities in the books of parochial and other officers, we addressed a Circular Letter to the auditors (see Appendix, p. 52), requesting them to state in their Reports whether the matter was so dealt with at the audit as in their opinion to render a direct communication from us to the officer unnecessary.

Disallowances and surcharges.

Disallowances and surcharges to the number of 7,061 were made by the District Auditors during the year ended 31st December 1882. At p. 448 of the Appendix, a table will be found giving particulars of these disallowances and surcharges.

Appeals.

The decisions of the Auditors were in many cases appealed against, and we were called upon during the year to determine 2,285 of such appeals, a summary of which will be found in the Appendix at p. 449.

Examples of disallowed expenditure.

We drew attention in our last report to cases which had come before us on appeal from the Auditors' decisions, and in which various illegal payments had been made out of the rates.

During the past year there were several cases in which Overseers had entered in their accounts charges for journeys alleged to have been taken for the purpose of paying the parish contributions at the Union Offices. It appeared, however, that the payments had been made through the post, and that the Overseers' charges of 1*s.* a mile for "travelling expenses" represented neither journeys taken nor expenses incurred.

Several instances came under our notice in which the cost of refreshments consumed by Guardians and other officials had been disallowed, and where there was unmistakeable proof that the rates had been misapplied by persons to whom the law had entrusted them for legal disbursement. Such cases, however, we are glad to say, were not as numerous as in former years.

Expenses in connexion with the practice of beating Parish Boundaries frequently come before us on appeal, and the items, with regard to which we are called upon to adjudicate, show that in some districts these proceedings are regarded as local festivities of a not unimportant kind. In one case we found that a party of nearly four score men and boys were engaged in the perambulation of the parish in omnibuses and cabs, with wands, rosettes, and flags. The party was provided with dinner in the middle of the day, and with refreshments afterwards. We were unable to satisfy ourselves that the charges for dinners and omnibuses and cabs were such as demanded the exercise of our equitable jurisdiction, and we therefore declined to interfere with the Auditor's decision.

In another case we found that the Auditor had disallowed "as useless and excessive expenditure," the charges made by the party engaged in perambulating the boundaries, comprising such items as "coppers scrambled *en route*, 1*l.* 2*s.*," and "coppers (in penny pieces) given with a bun to each child attending the perambulation, 13*s.* 10*d.*"

We have pointed out in previous reports that the salaries of mole-catchers have been charged upon the Highway Rates regularly for many years. As a consequence of these rates coming under the supervision of our auditors, however, the practice has had to be discontinued. In one hamlet where the mole-catching was alleged to have been charged in the Highway Surveyors' Accounts for the past 15 or 20 years, the sudden termination of the arrangement resulted in the Surveyors being "threatened with "litigation by the mole-catcher for stopping him "without notice."

In another locality it appeared that it had been the custom for 20 years to take a penny in the £ from the Highway Rate once in 2 or 3 years to pay the expense

of destroying moles and sparrows. As regards the sparrows the Surveyors said, "We engage a man to pay for "the sparrows . . . He takes them from the children "by whom they are principally catched. He pays for "them at the following rate: two old ones for a penny; "young ones and eight eggs for a penny."

An illustration of the misapplication of rates collected for sanitary purposes came under our notice in a case where an arrangement existed by which the jurymen at all inquests held in a certain district were paid for their services at the rate of 1*s.* each out of the funds of the Local Board.

Expenditure on buildings and purchase of sites for Poor Law purposes.

Tables will be found in the Appendix, pp. 286–293, showing the expenditure which Guardians or Managers of Asylums or District Schools have been authorised to incur in the purchase or erection of workhouses, asylums, schools, and other buildings, or in additions thereto or alterations therein, according to plans of which we have approved, or in the purchase of land for sites or other purposes.

The total amounts authorised during the year to be expended for the several purposes above indicated are as follow:—

	£	*s.*	*d.*
Workhouses - - -	441,151	5	5
Metropolitan District Asylums	2,200	0	0
District Schools - -	1,593	6	3
Total -	444,944	11	8

The Tables show the names of the Unions or Districts, the amount authorised in each case, and the purpose for which the expenditure was incurred.

The expenditure for the purposes mentioned in the Tables requires the authority of our Order, except where the amount does not exceed 500*l.*, in which case our sanction by letter is sufficient under section 8 of the 29 & 30 Vict. c. 113. As a preliminary to the Order, the formal consent of the Guardians or Managers in the cases of Unions or School Districts is necessary. Until the enactment contained in section 12 of the Divided Parishes and Poor Law Amendment Act of last Session (45 & 46 Vict. c. 58.) it was requisite to obtain the consent in writing of a majority of the Guardians or

Managers, but under that section it is now sufficient if the consent is given by a resolution passed at a meeting held after not less than fourteen days' notice to each Guardian or Manager.

Limitation of expenditure and borrowing powers.

The Statutes impose certain limits on the expenditure to be incurred in the purchase of sites, or the erection, purchase, or alteration of buildings, and in connexion with the consent to the issue of an Order for any of those purposes the Guardians or Managers whose signatures were affixed to the consent had formerly to certify that the contemplated outlay, with the amount outstanding in respect of loans already contracted, did not exceed the prescribed limit.

By the substitution by the enactment above referred to of a resolution for the written consent of a majority, much inconvenience and delay have been obviated, and, with a view still further to facilitate the proceedings, we have prepared forms of resolution (adapted to the varied circumstances of the several cases), to which are appended forms of certificate to be signed by the Clerk as regards the limits of expenditure and borrowing powers.

Repayment of loans.

Section 14 of the Act of 1882 also dispenses with the necessity for submitting for our approval drafts of securities for loans, and for transmitting to us the deeds of security for registration. Our consent, however, is still required to the mode of repayment of loans obtained by Guardians and Managers, and, except in cases where loans are obtained from the Metropolitan Board of Works, to the period of repayment also.

Amounts borrowed.

Most of the Orders authorising the expenditure included in the Tables in the Appendix, pages 286–293, empowered the Authorities to obtain loans. The total amount obtained on loan during the year for the purposes specified in those Tables, or in the similar Tables furnished in previous Reports, was £372,989.

Sale of union and parish property and appropriation of produce

The amount realised during the year by the sale of Union and Parish Property under Orders which we have issued was 105,483*l.* 4*s.* 1*d.*; and the usual Table will be found in the Appendix, p. 294 containing information as to the amount of the purchase money in each case, as

well as the mode in which the sum remaining after payment of the sale expenses has been dealt with, and the purpose to which it has been appropriated, where any Order has been issued in that behalf. The Table also shows the appropriation of the proceeds of some sales completed in previous years and referred to in former Reports.

In most of the cases mentioned in the Tables the proceedings were taken under the Poor Law Amendment Act, 1834 (4 & 5 W. 4. c. 76.), and the Union and Parish Property Act, 1835 (5 & 6 W. 4. c. 69.). Some of the sales, however, took place under the "Sale of Exhausted Parish Lands Act, 1876" (39 & 40 Vict. c. 62.), and these cases are indicated by a note at the foot of the Table.

We often experience some difficulty in dealing with applications made to us for the appropriation of sale produce. Where the sale takes place under the Union and Parish Property Act, 1835, it is required by section 3 of that Act that the proceeds shall be applied in such manner for the "permanent advantage" of the Union or Parish as we may approve. Many of the proposals submitted to us relate to objects which do not come within this description, such as expenditure for repairs to buildings, or for fittings and furniture. It occasionally happens that a loan which has a considerable number of years left for repayment has been obtained from the Public Works Loan Commissioners, or some Association, who will be willing to receive the amount of the sale produce as an extraordinary payment, the future instalments being proportionately reduced, and this is an arrangement to which we offer no objection. Applications are becoming frequent for the appropriation of the sale produce of parish property towards the cost of erecting school buildings, and as a general rule we assent to such proposals if the school is a Public Elementary School within the meaning of the Elementary Education Acts. In some instances where the terms of the trust are not such as to impose on the managers an obligation to conduct the school as a Public Elementary School, but the appropriation seems otherwise desirable, we suggest that an endorsement should be made on the trust deed and signed by the managers to the effect that, in the event of the sale produce being applied as proposed, the school shall be conducted as a Public

Elementary School until in pursuance of a resolution to be passed at a meeting of a majority of the managers the sum granted has been repaid. This suggestion is usually acquiesced in, and in such cases we authorise the appropriation of the sale produce accordingly.

Where no proposal is made which appears to us to be of permanent advantage to the Union or Parish, we require the amount to be invested by the Guardians in Consols or, if it be small, to be deposited by them in a Post Office Savings Bank, the dividends or interest, as the case may be, to be applied from time to time in aid of the common fund of the Union, or of the Poor Rates of the Parish.

Produce arising from the sale of exhausted Parish Lands is required by the 39 & 40 Vict. c. 62. s. 6, to be "applied, as far as practicable, in the repair of the high-"ways in the Parish, or in some permanent improve-"ment of the highways, or in an investment so that "the annual dividends may be applicable in aid of the "Highway Rate," until we may otherwise order.

We issued 61 Orders during the year for the investment or appropriation of sale produce, and the mode of appropriation of the proceeds of each sale will be seen on reference to the last column of the Table.

As regards exhausted Parish Lands, our powers with respect to the appropriation of sale produce are not confined to cases where the sale has taken place under our Order; but section 6 above referred to enacts that "the "Local Government Board shall have the like power "of dealing with the produce of the sale of Lands "under the Highway Acts, if applied to by the Sur-"veyor of Highways or any Authority exercising the "powers of such Surveyor, where such produce cannot "be conveniently appropriated in the manner provided "by those Acts."

Two cases were dealt with by us under this section. In one of them, namely, the Parish of King's Sutton (Northampton), exhausted lands had been sold by the Brackley Highway Board, acting as Surveyors of the Highways, and we issued an Order authorising the appropriation of the sale produce towards defraying the cost of improving footpaths and highways. In the other case, that of the Parish of Hauxton, in the County of Cambridge, the land had been sold by the Surveyor of Highways, and we authorised a part of the produce to

be applied towards payment of the cost incurred in connexion with the conversion of an open ditch into a culvert.

Certified schools.

In continuation of the Table furnished in our last Report we have given at page 267 of the Appendix a list of eight schools which are supported wholly or partially by voluntary subscriptions, and which, after due inquiry by our Inspectors, have during the year been certified for the reception of children in accordance with the Statute 25 & 26 Vict. c. 43. Four certificates previously granted were cancelled by us, as shown in the separate list under that head. In two of these cases the school was transferred to other premises, in another case contributions from the Poor Rate towards the support of any child in the school had ceased, and in the fourth the Managers had discontinued occupation of the premises.

Orders issued.

The number of Orders under seal issued during the year with regard to matters connected with Poor Law administration is 1,226, and the Appendix, p. 452, contains the usual Table, in which the Orders are classified according to the principal subjects to which they relate.

General Orders.

A separate Table as regards General Orders will be found at p. 457 of the Appendix. Of the seven Orders comprised in this Table, four, being addressed to single Unions, are only General Orders within the meaning of the 10 & 11 Vict. c. 109. s. 15, which includes in that term all Orders which vary or rescind a General Order, although such Orders are not addressed to or do not affect more than one Union. The particulars of these four Orders, which relate respectively to the Derby, Nottingham, Prescot, and Woolwich Unions, are sufficiently set forth in the Table.

Two General Orders, dated respectively the 7th and the 18th of December 1882, were addressed to the Guardians of all Unions and Separate Parishes, and the former was addressed also to the Boards of Management of District Schools as well as the Managers of the Metropolitan Asylum District.

As regards the Order of the 7th of December, we have already called attention to section 14 of the Act of last Session (45 & 46 Vict. c. 58.), under which it is no longer necessary that deeds or other instruments

relating (amongst other things) to securities for loans obtained by Guardians or Managers should be approved, sealed, or registered by us. That section, however, requires that the Guardians or Managers shall keep a register of the securities in respect of all sums borrowed by them, in such form and subject to such regulations as to inspection or otherwise as we may from time to time prescribe. The Order of the 7th of December prescribes a form of register accordingly, which includes such particulars as appeared to us to be requisite, not only for the information of persons with whom negotiations for the advance of loans may be made, but also as a record for subsequent reference by the borrowers or other parties concerned. The Order likewise contains regulations with respect to the mode of authenticating the entries in the register, as well as with respect to its custody and inspection. A copy of the Order will be found in the Appendix, p. 56.

The Order of the 18th December 1882 is the Order prescribing the Regulations, to which we have already referred, with regard to casual paupers.

Triennial service of Guardians.

A very large increase has taken place during the year in the number of applications made to us for an alteration of the period for which Guardians are elected to serve, from one year to three years. In the four years preceding, the number of applications received by us on this subject was as follows :—1878, 5 ; 1879, 2 ; 1880, 1 ; 1881, 3 ; but in the year 1882 we received no less than 28 such applications.

As pointed out in previous Reports, we are unable to give effect to the proposal in any case without the consent of a majority of the owners of property and ratepayers, under section 41 of the 4 & 5 W. 4. c. 76. In every instance, therefore, we issue an Order prescribing regulations with the view of ascertaining by a poll the opinion of the owners and ratepayers on the subject. Of the 11 applications made to us in the years 1878–81, two were withdrawn before the regulations with regard to a poll took effect, and in one case the proceedings failed. In four Unions the proposal was adopted, and in the remaining four the result was adverse to a change. In each of the 28 cases which occurred last year, the majority of votes was in favour

of the proposal, but only 20 of those cases were finally disposed of by us during that year.

The following is a list of the 24 Unions and Separate Parishes in which the triennial system had been put in operation on the 31st of December 1882:

Barton-upon-Irwell.	Nottingham.
Birkenhead.	Ormskirk.
Blackburn.	Prescot.
Burnley.	Preston.
Chorlton.	Prestwich.
Dewsbury.	Sculcoates.
Gateshead.	Sheffield.
Haslingden.	South Shields.
Leeds.	Stockport.
Leigh.	Toxteth Park.
Macclesfield.	Wakefield.
Manchester.	Worcester.

In 22 of the Unions in which the triennial system is in force, the whole of the Guardians retire every third year; and in two cases, viz., Nottingham and Toxteth Park, one-third of the number retires each year.

Appeals with respect to elections.

We issued orders deciding 13 appeals which were made to us during the year with respect to proceedings connected with the election of Guardians. In 12 of these cases we reversed the decision of the Returning Officer, who had either rejected nominations as invalid which we found to be valid, or had certified as elected candidates whom we found ought not to have been so certified. In the remaining case, where the Returning Officer had certified one of two candidates as duly elected, the result of our inquiries showed that the other had an equal number of lawful votes recorded in his favour, and we declared the election as certified by the Returning Officer to be null and void, and made provision for a new election.

Uniting parishes for elections.

Section 6 of the Poor Law Amendment Act, 1868, provides that where any Parish in a Union has a population not exceeding 300 persons according to the last Census, and a rateable value not exceeding the average rateable value of the Parishes in the same Union, it may be added to some adjoining Parish in the Union for the purpose of the election of Guardians. During the year we issued Orders by which 43 small Parishes were dealt

with under this section, the proceeding in most instances being accompanied by an alteration in the numbers of Guardians assigned to other Parishes in the same Union.

Division into wards.

Orders have been issued dividing into Wards for the purpose of the election of Guardians the Parishes of Llanwonno and Llanwitvairdre, in the Pontypridd Union; the Parish of Newark, in the Newark Union; the Parishes of Minster, St. John the Baptist, and St. Lawrence, in the Isle of Thanet Union; the Parish of Eling, in the New Forest Union; the Parish of Millom, in the Bootle Union; the Parish of Dorking, in the Dorking Union; the Parish of Abergavenny with Hardwicke and Lloyndu, in the Abergavenny Union; and the Parish of Somerby, in the Grantham Union. In some of these cases the Parishes dealt with were partly in the Rural Sanitary District of the Union, and partly in an Urban Sanitary District, and the Order was issued under section 9 of the Public Health Act, 1875.

Alterations in unions.

The Parish of Freshford was separated from the Bradford (Wilts) Union on the 29th day of September 1882, and was on the following day added to the Bath Union. This Parish was the only part of the Bradford Union which was in the County of Somerset, and it was on this ground that the alteration was made.

In the Table of Provisional Orders in page 436 of the Appendix to our 11th Annual Report we referred to parts of divided Parishes which had been constituted separate Parishes under the names of Bishopsoil and West Fen. By the operation of section 3 of the 39 & 40 Vict. c. 61., those Orders took effect on the 25th of March 1882, and by further orders we added the Parish of Bishopsoil to the Howden Union on the 25th May 1882, and the Parish of West Fen to the Spilsby Union on the 5th of that month.

"Quarter Bach," which was formerly a part of the Parish of Llangadock in the Llandovery Union, but was constituted a separate Parish under that name on the 25th of March 1882, was added to the Llandilo Fawr Union on the 24th of May 1882.

Alteration of school district.

The Richmond Union was separated from the North Surrey School District on the 29th of September 1882.

This School District now only comprises the Croydon, Lewisham, and Wandsworth and Clapham Unions.

Alterations of parishes.

No less than 120 Orders affecting the areas of Parishes, have been issued during the year, under the authority of the "Divided Parishes and Poor Law Amendment Act, "1876," as amended and extended by "The Poor Law "Act, 1879."

The Orders of this class which became operative on the 25th March 1882, were those which were issued during the year 1881, or which having been issued in 1880 were objected to and became Provisional.

It may be convenient here to specify precisely the alterations which took effect under our Orders during the year 1882 as regards Parochial and Highway areas respectively.

As regards Parochial areas the alterations are shown in the following Table:—

Name of Divided Parish and of the Union in which situate.		Name of Parish with which parts were amalgamated and of the Union in which situated.	
Union.	Parish.	Parish.	Union.
Auckland	Willington	Helmington Row	Durham.
Blandford	Milton Abbas	Chesilborne	Cerne.
Ditto	Ditto	Owenmoigne	Weymouth.
Boston	Frieston	West Fen	Spilsby.
Spilsby	Hareby		
	Hundleby		
	Keal, West		
Boston	Leverton		
Spilsby	Mavis Enderby		
	Reithby		
Boston	Swinehead	Pelhams Land	Boston.
Chester-le-Street	Usworth (Great and Little).	Haraton	Chester-le-Street.
Doncaster	Conisbrough	Dalton near Rotherham.	Rotherham.
Ditto	Mexborough	Swinton	Ditto.
Droitwich	Dodderhill	Bromsgrove	Bromsgrove.
		Grafton Manor	
	Upton Manor	Bromsgrove	
		Grafton Manor	
Ditto	St. Peter	Saint Nicholas	Droitwich.
	St. Andrew	Ditto	
		Salwarpe	
	St. Nicholas	In Liberties	
	Dodderhill	Hadsor	
		Hanbury	
	Warndon	Hinlip	
	Claines		
	Salwarpe	Saint Nicholas	
		Hampton Lovett	

Name of Divided Parish and of the Union in which situate.		Name of Parish with which parts were amalgamated and of the Union in which situated.	
Union.	Parish.	Parish.	Union.
Durham	Kimbleworth	Chester-le-Street	Chester-le-Street.
Ditto	Stockley	Willington	Durham.
Ditto	Willington	Stockley	Ditto.
Ditto	Brandon and Byshottles.	Brancepeth	Ditto.
Ditto	Brancepeth	Stockley	Ditto.
Ditto	Pittington	Rainton West	Houghton-le-Spring.
Haverfordwest	Steynton	Walvens Castle	Haverfordwest.
Hitchin	Bygrave	Baldock	Hitchin.
	Clothall		
	Norton		
	Weston		
	Willian		
Horncastle	Asgarby	Carrington	Boston.
Spilsby	Bolingbroke		
Boston	Boston		
Horncastle	Miningsby		
	Revesby		
Howden	Asselby	Bishopsoil	Howden.
	Barmby-on-the-Marsh		
	Bellasize		
	Blacktoft		
	Cotness		
	Eastrington		
	Gilberdike		
	Knedlington		
	Laxton		
	Metham		
	Yokefleet		
Ditto	Balkholme	Eastrington	Howden.
	Eastrington		
	Kilpin		
	Saltmarsh		
	Skelton		
Kendal	Nether Graveship	Kendal	Kendal.
	Kendal		
Kidderminster	Bewdley	Rock	Cleobury Mortimer.
Llandovery	Llangadock	Quarter Bach	Llandovery.
Orsett	Orsett	Stock	Chelmsford.
Rotherham	Wath-upon-Dearne	Brampton Bierlow	Rotherham.
Ditto	Brampton Bierlow	Wath-upon-Dearne	Ditto.
Runcorn	Antrobus	Seven Oaks	Runcorn.
Ditto	Norley	Crowton	Northwich.
Ditto	Ditto	Kingsley	Ditto.
Ditto	Seven Oaks	Antrobus	Ditto.
Thetford	Rymer	Fakenham Magna	Thetford.
Tregaron	Llambadarn Odyn	Llangeitho	Tregaron.
Tynemouth	Backworth	Murton	Tynemouth.
	Earsdon		
	Monkseaton and Whitley		
Ditto	Ditto	Backworth	Ditto.
Ditto	Ditto	Earsdon	Ditto.
Spilsby	Keale West	Stickford	Spilsby.
Horncastle	Lusby		
Spilsby	Spilsby		

Name of Divided Parish and of the Union in which situate.		Name of Parish with which parts were amalgamated and of the Union in which situated.	
Union.	Parish.	Parish.	Union.
Spilsby - -	Hagnaby - -	Thorpe - -	Spilsby.
Whitehaven -	Egremont - -	Hensingham -	Whitehaven.
Ditto - -	Saint Bees -	Preston Quarter -	Ditto.
Ditto - -	Saint Bridget's -	Gosforth - -	Ditto.
Ditto - -	Sandwith - -	Hensingham -	Ditto.
Ditto - -	Sandwith - -	Preston Quarter -	Ditto.
Ditto - -	Low Keekle -	Hensingham -	Ditto.

In all the cases included in the above Table, with the exception of seven, the orders dealt with parts of Parishes which were isolated and detached from the remainder of the Parishes.

Rymer consisted entirely of two isolated and detached parts, and as these have been amalgamated with Fakenham Magna, Rymer as a separate Parish has ceased to exist.

In the remaining seven cases the places dealt with were "divided Parishes" as defined by the Poor Law Act, 1879. These cases include Low Keekle, Quarter Bach, Bygrave, Clothall, Norton, Weston, and Willian.

Quarter Bach and West Fen were constituted separate Parishes.

Adjustment of interests.

As the result of the alterations of areas, numerous and sometimes complicated questions arise with respect to the adjustment of the interests of the several Unions, Parishes, or Districts affected by the change. We have had under our consideration the cases which appeared to require an adjustment, and we have issued 18 Orders with regard to these cases during the year.

Relief committees.

Under the regulations contained in the General Consolidated Order of the 24th of July 1847, and other General Orders, applications by paupers for relief are made to and decided on by the Guardians sitting as a Board. In consequence of the many additional duties which recent legislation has cast upon Guardians, we are occasionally applied to for authority to enable the Guardians to appoint Committees for the purpose of hearing and determining applications for relief. We issued twelve Orders of this class during the last year,

addressed to the Caistor, Falmouth, Lewisham, Lincoln, Northwich, Steyning, Wells, West Ham, Weymouth, and Woolwich Unions, the Hamlet of Mile End Old Town and the Parish of St. Luke, Chelsea. The Committees are also empowered to deal with applications made by parents who are not paupers for payment of School Fees.

District relief committees.

Section 7 of the 5 & 6 Vict. c. 57., enables us, on the application of the Guardians of any Union, in which the whole of any Parish or Parishes is situated more than four miles from the place of meeting of the Guardians, to form such Parish or Parishes into a Relief District, and to direct the Guardians to appoint a Relief Committee for the District. On the application of the Guardians of the Bootle Union we issued an Order forming the Parish of Millom into a Relief District, and directing the Guardians to appoint a Relief Committee for the District so formed. District Committees are only enabled to examine into the relief cases and make their recommendations to the Guardians, and are not empowered, like the ordinary Relief Committees, to decide upon the applications.

Decisions on disputed questions of settlement.

Two cases arose during the year in which we were called upon to exercise the power conferred upon us under the 14 & 15 Vict. 105. s. 12, of determining questions affecting the settlement, removal, or chargeability of paupers.

Regulations for out-door dispensary, separate infirmary, and separate school.

An Infirmary under management distinct from that of the Workhouse having been provided by the Guardians of the Salford Union, special regulations for its government were prescribed by an Order dated the 1st of August 1882. In the Nottingham Union the Guardians have erected a separate School, and have established a Dispensary for the out-door Poor, and regulations applicable to both were issued during the year.

Securities for loans to Poor Law authorities approved and registered.

In accordance with the provisions of the statutes 4 & 5 Will. IV. c. 76. and 32 & 33 Vict. c. 45., the drafts of 67 securities for loans to Poor Law Authorities have been approved by us, and the securities subsequently registered in our books.

Conveyances, leases, and agreements under Poor Law Acts.

The drafts of 77 conveyances, leases, and agreements have also been approved, the deeds being subsequently sealed, and, in the majority of instances, registered by us.

Vestry and parochial offices.

We have approved of 33 deeds authorising the acquisition, either by purchase or hire, of premises under the Vestries Act (13 & 14 Vict. c. 57.) and Parochial Offices Act (24 & 25 Vict. c. 125.)

Sale of exhausted parish lands.

Two sales under the Sale of Exhausted Parish Lands Act, 1876 (39 & 40 Vict. c. 62.), have been completed during the year, the drafts of the conveyances having been approved and the deeds subsequently sealed and registered by us.

Appropriation of land for burial purposes.

We have consented to the Guardians of the Bristol Incorporation appropriating, under section 6 of the Burial Act of 1857 (20 & 21 Vict. c. 81.), a portion of their property as a burial ground for such poor persons as they are authorised or required by law to bury.

We have also given our approval under the Consecration of Churchyards Act, 1867, to the grant by the Guardians of the Droitwich Union of a piece of land belonging to the Chapelry of Elmbridge, within that Union, to enlarge Elmbridge Churchyard.

Grant of school sites.

We have consented to grants of parish property under the School Sites Act, 1841 (4 & 5 Vict. c. 38.) in two instances.

List of deeds registered.

The list in the Appendix, p. 303, shows the number of deeds and other documents which we have approved during the years 1880, 1881, and 1882; the number as regards the last year being those deeds only which were executed between the 1st of January 1882, and the 18th August 1882, the date when the Divided Parishes and Poor Law Amendment Act, 1882, received the Royal Assent.

Poor rate expenditure for purposes other than relief of the Poor

Before concluding this part of our Report, it may be well to give some account of the expenditure, which is defrayed out of the poor rate, for purposes other than the relief of the poor. This expenditure includes payments towards county, borough, and police rates; pay-

ments by Overseers to Highway Boards, Burial Boards, and School Boards, and to Rural Sanitary Authorities in respect of general expenses; vaccination fees and expenses; payments on account of the Acts as to the registration of births, deaths, and marriages; School Attendance Committee expenses; expenses allowed in respect of parliamentary or municipal registration, and costs of jury lists. Details of this expenditure during the last ten years are given in the Appendix, p. 156.

In the Appendix, pages 166 and 167, will also be found a tabular statement, showing the sums levied as poor rates, and received in aid of the poor rates, including Treasury subventions, during the parochial years from 1842 to 1882, both inclusive, and the purposes to which these sums were applied during each year. From this statement it will be observed that the expenditure out of the poor rate for purposes other than the relief of the poor, has increased to a much greater extent than the expenditure on the relief of the poor. The extent to which these expenditures have respectively increased between the parochial years 1872 and 1882, is shown by the following summary :—

Years ended at Lady-day.	Receipts.			Expenditure.		
	From Poor Rates.	Receipts in Aid.	Total.	Relief to the Poor only.	All other Purposes.	Total.
	£	£	£	£	£	£
1872	12,100,490	508,448	12,608,938	8,007,403	4,373,875	12,381,278
1873	12,190,600	467,343	12,657,943	7,692,169	4,734,397	12,426,566
1874	12,342,251	461,511	12,803,762	7,664,957	5,186,050	12,851,007
1875	12,483,133	711,313	13,194,446	7,488,481	5,205,727	12,694,208
1876	12,092,087	813,308	12,905,395	7,335,858	5,301,084	12,636,942
1877	12,049,046	899,128	12,948,174	7,400,034	5,598,203	12 998,237
1878	12,585,677	904,035	13,489,712	7,688,650	5,926,647	13,615,297
1879	12,913,797	957,321	13,871,118	7,829,819	5,863,365	13,693,184
1880	13,033,655	967,857	14,001,512	8,015,010	6,077,092	14,092,102
1881	13,302,088	1,038,504	14,340,592	8,102,136	6,288,126	14,390,262
1882	13,947,681	970,592	14,918,273	8,232,472	6,632,267	14,864,739

It will be seen from these figures that the aggregate of the sums levied as poor rates and received in aid of such rates during the parochial year 1882 was greater

by 2,309,335*l.* or 18·3 per cent. than it was in the parochial year 1872; and that, while in the former of these years as compared with the latter the expenditure on the relief of the poor had increased to the extent of 225,069*l.*, or 2·8 per cent., the expenditure chargeable to the poor rate for all other purposes had increased to the extent of 2,258,392*l.*, or 51·8 per cent. Of the total expenditure during the year 1882, 55·5 per cent. was for poor relief and 44·5 per cent. for other purposes.

The following Table shows the rates in the pound on the rateable value of the property liable to contribute to the poor rate, which are represented by the total amount of the poor rate levied, and by the amount expended on the relief of the poor in each of the parochial years from 1872 to 1882, both inclusive. It will be seen from it that as regards the expenditure on the relief of the poor the rate in the pound decreased during these years to the extent of 3·8*d.*, whilst as regards the total amount of the poor rate levied it decreased to the extent of 3*d.* only.

Years ended at Lady-day.	Amount of Poor Rate levied.	Rateable Value.	Rate in the £.	Expended on Relief of the Poor.	Rate in the £.
	£	£	*s.* *d.*	£	*s.* *d.*
1872	12,100,490	107,398,242	2 3·0	8,007,403	1 5·9
1873	12,190,600	109,447,111	2 2·7	7,692,169	1 4·9
1874	12,342,251	112,392,362	2 2·4	7,664,957	1 4·4
1875	12,483,133	115,646,631	2 1·9	7,488,481	1 3·5
1876	12,092,087	119,079,589	2 0·4	7,335,858	1 2·8
1877	12,049,046	124,587,474	1 11·2	7,400,034	1 2·3
1878	12,585,677	127,948,380	1 11·6	7,688 650	1 2·4
1879	12,913,797	131,021,019	1 11·7	7,829,819	1 2·3
1880	13,033,655	133,769,875	1 11·4	8,015,010	1 2·4
1881	13,302,088	135,645,473	1 11·5	8,102,136	1 2·3
1882	13,947,681	139,636,307	2 0	8,232,472	1 2·1

Poor Law legislation.

We have already alluded to the Divided Parishes and Poor Law Amendment Act and the Casual Poor Act which passed during the session of 1882. The poor law legislation during the year also includes the Poor Rate Assessment and Collection Act, 1869, Amendment Act, 1882, and sec. 14. of the Bills of Sale Act (1878) Amendment Act, 1882.

The Poor Rate Assessment and Collection Act, 1869, Amendment Act, 1882, removed the hardship which had been experienced owing to the decisions of the Courts of law with regard to the provision in section 16 of the Poor Rate Assessment and Collection Act, 1869, that the outgoing occupier of any premises should only be liable for so much of any poor rate as was proportionate to the time of his occupation within the period for which the rate was made. The Courts decided that this enactment only applied when the outgoing tenant was succeeded by another, and that consequently if there was no incoming tenant the outgoing occupier remained liable for the whole rate. Under the new Act the outgoing occupier is only liable for his proportion of the rate, whether there is an incoming tenant or not.

The same Act removed a difficulty, which had been caused by a recent decision in the Queen's Bench Division in the case of the Queen v. Dyott and others, L. R. 9, Q. B. D., 47, to the effect that a poor rate which had not been published in the parish for which it was made, by reason of there being no church or chapel to which the notice could be affixed, was invalid. Section 4 of the Act provides that in such a case the rate shall be deemed to have been duly published if, within 14 days after it is made, notice of it has been affixed in some public and conspicuous place or situation in the parish.

The Bills of Sale Act (1878), Amendment Act, 1882, by section 14 provides that a bill of sale to which the Act applies shall be no protection in respect of personal chattels included in such bill of sale, which but for such bill of sale would have been liable to distress under a warrant for the recovery of taxes and poor and other parochial rates.

The attention of Boards of Guardians was drawn to these provisions, in a Circular relating to the Poor Law Legislation in the Session of 1882, which we issued on the 31st of August last, and which will be found in the Appendix, page 45.

II.—*Local Government and Public Health.*

Loans of Sanitary Authorities sanctioned by the Department.

In accordance with our usual practice we will now proceed to show the extent to which the raising of loans by Sanitary Authorities has been sanctioned by the Central Departments which have successively been

charged with the administration of the Sanitary Acts and the Public Health Act, 1875 :—

The total amount of the loans which were sanctioned by the General Board of Health under the Public Health Act, 1848, up to the 1st of September 1858, when the Local Government Act, 1858, came into force, was 2,956,178*l.*

The sanctions granted by the Secretary of State under the latter Act, and the Sewage Utilization Act, 1865, prior to the 19th of August 1871, amounted to 7,363,366*l.*

Since our constitution on the 19th of August 1871, we have sanctioned the following amounts to be raised by Urban and Rural Sanitary Authorities, viz. :—

	£
In 1871	267,562
1872	602,271
1873	980,153
1874	1,457,496
1875	1,973,105
1876	2,757,323
1877	4,380,369
1878	3,097,857
1879	3,308,032
1880	2,932,899
1881	2,526,190
1882	2,485,288
Total	26,768,545

By far the greater proportion of these sums has been sanctioned for the purpose of sanitary improvements in Urban Districts, to be executed under the provisions of the Sanitary Acts and the Public Health Act, 1875. The remainder has been sanctioned principally in respect of sanitary improvements in Rural Districts or improvement schemes under the Artizans and Labourers Dwellings Improvement Act, 1875.

The following statement shows the total amounts of the loans sanctioned by us during the last ten years in respect of sanitary improvements in Urban Districts,

other than improvement schemes under the last mentioned Act:—

	£
In 1873	959,203
1874	1,338,181
1875	1,835,796
1876	2,063,708
1877	3,080,144
1878	2,789,677
1879	2,870,601
1880	2,688,742
1881	2,264,622
1882	2,225,781
Total	22,116,455

The amounts which we have sanctioned during the same period in respect of sanitary improvements in Rural Districts have been as follows:—

	£
In 1873	20,950
1874	119,315
1875	137,308
1876	193,615
1877	196,792
1878	238,180
1879	269,885
1880	194,157
1881	249,194
1882	178,907
Total	1,798,303

The amounts which we have sanctioned under the Artizans and Labourers Dwellings Improvement Act, 1875, are as follows:—

	£
In 1876	500,000
1877	1,103,433
1878	70,000
1879	167,546
1880	50,000
1881	12,374
1882	100,000
Total	2,003,353

In addition to the above the following loans to be raised by Joint Boards have been sanctioned by us, viz. :—

	£
In 1875	2,500
1876	16,500
1877	115,000
1878	50,000
1879	260,000
1880	50,635
1881	195,000
1882	66,350
Total	755,985

The loans to the Joint Boards were all sanctioned in respect of systems of sewerage and sewage disposal, or for the provision of hospitals, and for the purchase of land in connexion with those objects. The loans to Joint Boards, although not included amongst the loans sanctioned to be raised by Sanitary Authorities, are, as we have explained in previous Reports, virtually a charge upon the Urban and Rural Sanitary Districts comprised in the United Districts over which the Joint Boards exercise jurisdiction, and the payments in respect of these loans are met out of the same class of rates as would have contributed to them if the loans had been contracted for the same purposes by the Sanitary Authorities of the constituent districts.

Detailed information with regard to the loans which we have sanctioned during the past year, their purposes, the Authorities by whom they are to be raised, and the number of years within which they are to be repaid will be found in the Appendix, p. 376, *et seq.*

The following figures show the aggregate amounts of the loans which have been sanctioned by us during the past four years to be raised by Urban and Rural Sanitary Authorities for works of water supply and sewerage and sewage disposal, respectively :—

Urban Sanitary Authorities.

	Water Supply.	Sewerage and Sewage Disposal.
	£	£
In 1879	293,880	1,088,819
1880	420,932	947,540
1881	305,187	594,903
1882	192,025	541,563

Rural Sanitary Authorities.

	Water Supply.	Sewerage and Sewage Disposal.
	£	£
In 1879	75,473	191,097
1880	53,191	98,731
1881	67,593	160,267
1882	45,604	112,860

Among the purposes for which we have sanctioned loans during the year have been included the construction, widening, paving, flagging, and channelling of public and private streets, the erection of offices, public baths and washhouses, bridges, gasworks, markets, hospitals, sea defences, the provision of pleasure grounds, cemeteries, slaughter-houses, steam road rollers, fire engines and appliances, manure depôts, and works for the removal of night-soil, and for the destruction of refuse.

A loan of 650*l.*, the borrowing of which we sanctioned under the Public Health Act, 1875, was to be employed for the purposes of the Artizans and Labourers Dwellings Acts, 1868 and 1879.

We have, as in former years, before sanctioning loans required to be furnished with detailed particulars as to the manner in which the loans were proposed to be expended, and we have been careful to satisfy ourselves that the intended works were desirable, and that the estimates were not excessive. With the view of obtaining full information on these points, and of affording

all persons interested an opportunity of being heard on the subject, it is our practice, on receiving an application from a Sanitary Authority for permission to borrow, except in a few cases where small loans are in question, to cause a local inquiry to be held by one of our Engineering Inspectors after public notice in the district. Before granting our sanctions, we have further required to be informed of the arrangements made by the Sanitary Authorities for the due discharge of their outstanding debt, if any, under the Sanitary Acts and the Public Health Act, 1875. The powers of borrowing conferred by these enactments are only exerciseable subject to certain conditions, one of the most important of which is that annual provision shall be made for the repayment, within the prescribed term, of each loan raised under them, either by instalments or by means of a sinking fund. In some cases we have found that these conditions have been disregarded, and we have brought the matter under the notice of the Authority, with the result that a more strict compliance with the requirements of the statutes has been secured.

Loans authorised to be raised by Sanitary Authorities under Local Acts.

The following statement shows the extent to which borrowing powers exerciseable without our sanction have been conferred by Parliament upon Sanitary Authorities during the last eleven years. It will be observed that in some cases, where the issue of perpetual annuities has been authorised, or a general power given to borrow unascertained amounts, it has not been practicable for us to capitalise the sums authorised to be borrowed under the powers thus conferred:—

	£
The total amount of the borrowing powers exerciseable without our sanction by Sanitary Authorities conferred by Local Acts during the Session of 1872 was (exclusive of annuities issued by the Corporation of Bolton and the Bury Improvement Commissioners as the consideration for the purchase of the undertakings of the Bolton Gas Company and the Bury and Radcliffe Waterworks) - - - - - -	2,571,750
Ditto during the Session of 1873 (exclusive of the issue of annuities by the Over Darwen Local Board for the purchase of the undertakings of the Darwen Waterworks Company and the Over Darwen Gaslight Company) - - -	1,347,500

	£
The total amount of the borrowing powers exerciseable without our sanction by Sanitary Authorities conferred by Local Acts during the Session of 1874 (exclusive of the unascertained amounts proposed to be borrowed by the Corporation of Nottingham for the purchase and extension of the undertaking of the Nottingham Gaslight and Coke Company, and the issue of annuities by the Padiham and Ulverston Local Boards for the purchase of the undertakings of the Padiham Waterworks Company and the Ulverston Gas and Water Companies) - - -	866,324
Ditto during the Session of 1875 (exclusive of the unascertained amount proposed to be borrowed by the Corporation of Birmingham for the purchase of the undertaking of the Company of Proprietors of the Birmingham Waterworks)	6,236,000
Ditto during the Session of 1876 (exclusive of the unascertained amounts proposed to be borrowed by the Corporations of Stockton and Middlesbrough, the Improvement Commissioners of Llandudno and West Bromwich, and the Local Boards of Oldbury, Padiham, Smethwick, Tipton, and Walsall, for the purchase of gas and water undertakings) - - - -	3,211,100
Ditto during the Session of 1877 (exclusive of an unascertained amount proposed to be borrowed by the Maryport Trustees for the purchase of gasworks) - - - -	4,141,851
Ditto during the session of 1878 (exclusive of the unascertained amounts proposed to be borrowed by the Corporations of Cheltenham and Leicester for the purchase of two water undertakings and one gas undertaking, and by the Bangor, Cockermouth, and Workington Local Boards, the Ramsgate Improvement Commissioners, and the Rural Sanitary Authority of the Cockermouth Union, for the costs of the promotion of Local Acts) - - - -	2,107,563
Ditto during the Session of 1879 (exclusive of the unascertained amounts proposed to be borrowed by the Corporations of Bath and Derby, and the Stratford-upon-Avon Local Board, for the purchase of a recreation ground and a water and gas undertaking, and by the Rural Sanitary Authorities of the King's Norton and Solihull Unions for the costs of the promotion of a Local Act) - - - - - -	6,417,754

	£
The total amount of the borrowing powers exerciseable without our sanction by Sanitary Authorities conferred by Local Acts during the Session of 1880 (exclusive of the unascertained amounts proposed to be borrowed by the Denton and Haughton Local Boards for the purchase of a gas undertaking, and by these Local Boards and the Corporations of King's Lynn and Rochester for costs of the promotion of Local Acts, and exclusive of moneys which may be borrowed by the Corporation of Burton-upon-Trent on mortgage of their sewage land and their revenues) - - - -	4,933,900
Ditto during the Session of 1881 (exclusive of the unascertained amounts proposed to be borrowed by the South Stockton Local Board and the Stockton Corporation for the construction of a bridge) - - - -	1,548,025
Ditto during the session of 1882 (exclusive of the moneys which may be borrowed by the Corporation of Blackburn on mortgage of their sewage farm, and of the unascertained amounts which may be borrowed by various local authorities as mentioned below) - -	2,384,307
Total* -	£35,766,074

We append in tabular form a statement showing (1) the names of the Sanitary Authorities on whom borrowing powers exerciseable without our sanction were conferred during the year by provisions in Local Acts; (2) the extent, so far as it can be ascertained, of the borrowing powers; (3) the purposes for which the loans may be contracted; (4) the periods prescribed for repayment; and (5) the titles of the Local Acts which have given the powers of borrowing in the several cases.

* Exclusive of the unascertained amounts required for the purposes above referred to, and for defraying the costs of the promotion of several Local Acts, &c.

Name of Authority.	Extent of borrowing Powers.	Purpose of Loan.	Term for Repayment.	Title of Local Act.
	£			
Accrington Corporation.	10,000	New streets and street improvements.	60 years	Accrington Improvement Act, 1882.
Ditto	13,000	Markets and slaughter-houses.	Ditto	
Ditto	12,000	Town Hall and Municipal Offices.	Ditto	
Ditto	20,000	General purposes	Ditto	
Ditto	45,000	Tramway purposes	Ditto	Accrington Corporation Tramways Act, 1882.
Ditto	Unascertained.	Expenses of Act	Ditto	
Blackburn Corporation.*	20,000	Street improvements	60 years	Blackburn Improvement Act, 1882.
Ditto	5,000	Farm buildings and improvements at sewage farms.	Ditto	
Ditto	2,000	Public baths	Ditto	
Ditto	50,000	Tramways	Ditto	
Ditto	5,000	General purposes	Ditto	
Bolton Corporation	50,000	New streets and roads and street and road improvements.	60 years	Bolton Improvement Act, 1882.
Ditto	112,500	Waterworks rent-charge redemption.	Ditto	
Ditto	100,000	Waterworks	Ditto	
Ditto	100,000	Gasworks	Ditto	
Ditto	40,000	Parks and recreation grounds.	Ditto	
Ditto	57,000	Sanitary purposes	Ditto	
Ditto	10,000	Town hall and municipal buildings.	Ditto	
Ditto	Unascertained.	Compensation for loss of office or emoluments and expenses of obtaining Act.	Ditto	
Chadderton Local Board.	3,000	Street improvements	30 years	Chadderton Improvement Act, 1882.
Ditto	30,000	Sewers, sewage and night soil works.	60 years	
Ditto	1,500	Town hall and offices	30 years	
Ditto	30,000	Private street improvements and works.	Ditto	
Ditto	Unascertained.	Expenses of obtaining Act.	Ditto	
Derby Corporation	3,307	New streets	60 years	Derby Corporation Act, 1882.
Ditto	7,000	Recreation ground	Ditto	
Ditto	Unascertained.	Expenses of obtaining Act.	Ditto	
Fulwood Local Board.	15,000	Waterworks and expenses of obtaining Act.	60 years	Fulwood and Whittingham Water Act, 1882.

* The Blackburn Corporation are also empowered by s. 142 of the Local Act to raise money on mortgage of the lands held by them subject to the provisions of the Act with respect to the sewerage works.

Name of Authority.	Extent of borrowing Powers.	Purpose of Loan.	Term for Repayment.	Title of Local Act.
	£			
Halifax Corporation -	1,000	Gasworks - -	60 years -	Halifax Corporation Act, 1882.
Ditto - -	10,000	Towns yard and sanitary depôt.	Ditto -	
Ditto - -	4,000	Private improvement works.	Ditto -	
Ditto - -	Unascertained.	Expenses of obtaining Act.	30 years -	
Huddersfield Corporation.	25,000	Markets - -	60 years -	Huddersfield Corporation Act, 1882.
Ditto - -	8,000	Burial ground -	Ditto -	
Ditto - -	50,000	Waterworks - -	100 years -	
Kingston-upon-Hull Corporation.	18,000	New road and street improvements.	60 years -	Hull Extension and Improvement Act 1882.
Ditto - -	20,000	Waterworks - -	Ditto -	
Ditto - -	Unascertained.	Discharge of loans transferred to Corporation.	30 years -	
Ditto - -	100,000	Contribution to railway and dock undertaking.	100 years -	
Ditto - -	Unascertained.	Expenses of obtaining Act.	—	
Liverpool Corporation	116,000	Street improvements	60 years -	Liverpool Improvement Act, 1882.
Ditto - -	30,000	College - - -	Ditto -	
Macclesfield Corporation.	Unascertained.	Confirmation of loans in excess of previous powers.	45 years -	Macclesfield Corporation Act, 1882.
Ditto - -	45,000	Gasworks - -	Ditto -	
Ditto - -	Unascertained.	Expenses of obtaining Act.	Ditto -	
Manchester Corporation.	400,000	Waterworks - -	- - -	Manchester Corporation Act, 1882.
Ditto - -	50,000	Rivers - - -	- - -	
Ditto - -	50,000	Highways - -	- - -	
Maryport District and Harbour Trustees.	70,000	Dock and harbour and expenses of obtaining Act.	60 years -	Maryport Improvement (Harbour) Act, 1882.
Newcastle-upon-Tyne Corporation.	100,000	Streets - - -	60 years -	Newcastle-upon-Tyne Improvement Act, 1882.
Ditto - -	45,000	Tramways - -	Ditto -	
Ditto - -	5,000	Parks and baths -	Ditto -	
Ditto - -	Unascertained.	Loans to school board	Ditto -	
Northampton Corporation.	10,000	Acquisition of land -	60 years -	Northampton Corporation Act, 1882.
Ditto - -	20,000	Parks and recreation grounds.	Ditto -	
Ditto - -	25,000	Streets - - -	Ditto -	
Nottingham Corporation.	200,000	Purchase of freemen's estate.	60 years -	Nottingham Corporation Act, 1882.

Name of Authority.	Extent of borrowing Powers.	Purpose of Loan.	Term for Repayment.	Title of Local Act.
	£			
Oswaldtwistle Local Board.	15,000	Composition to claimants defrauded by William Gourlay, late clerk to the local board.	50 years -	Oswaldtwistle Local Board Act, 1882.
Padiham Local Board	Unascertained.	Expenses of obtaining Act.	80 years -	Padiham Local Board Act, 1882.
Ditto - -	41,000	Waterworks - -	Ditto -	
Rotherham Corporation.	60,000	Waterworks - -	60 years -	Rotherham Corporation Act, 1882.
Ditto - -	30,000	Gasworks - -	Ditto -	
Saint Helens Corporation.	95,000	Waterworks - -	60 years -	St. Helens (Corporation) Water Act, 1882.
Tynemouth Corporation.	Unascertained.	Expenses of executing Act.	- - -	Tynemouth Corporation Loans Act, 1882.
Ditto - -	Ditto.	Expenses of obtaining Act.	- - -	
Wolverham ton Corporation.	Unascertained.	Expenses of Act - -	15 years -	Wolverhampton Corporation Loans Act, 1882.
Total - £	2,384,307			

Local Loans Act, 1875.

Under section 26 of the Local Loans Act, 1875, we have during the year given our official sanction to the issue of debentures by the Urban Sanitary Authorities of East Retford and St. Thomas-the-Apostle (Devon).

We have also, under section 15 of this Act, received several annual returns as to sinking funds from Local Authorities who have issued securities under the Act, and are providing for their repayment by this means.

Recommendations to Public Works Loan Commissioners.

Under section 243 of the Public Health Act, 1875, we have recommended the Public Works Loan Commissioners during the year to make advances amounting to 676,332*l.* at a reduced rate of interest to Urban and Rural Sanitary Authorities, and to Joint Boards formed under section 279 of the Act.

Of the sums thus recommended to be advanced, 462,821*l.* were required by Urban, 166,911*l.* by Rural Sanitary Authorities, and 46,600*l.* by Joint Boards for the purposes of the Public Health Act.

We also recommended the Commissioners to advance a sum of 100,000*l.* at a reduced rate of interest for the purposes of the Artizans and Labourers Dwellings Improvement Act, 1875.

In the Appendix, p. 389 *et seq.*, will be found statements showing with respect to each recommendation the date on which it was made, the place for which the advance was required, the amount recommended, the rate of interest proposed to be charged, the number of years within which the loan was to be repaid, and the purpose upon which it was to be expended.

Public Works Loans Acts, 1875–82.

We have investigated during the year the expenditure of loans advanced by the Public Works Loan Commissioners on the security of the rates to 1,146 Authorities in England and Scotland. The aggregate of the loans, the expenditure of which was thus examined, amounted to 3,042,625*l.*, and that of the balances which we found had not been required for the purposes for which the money was advanced to 14,848*l.*, exclusive of unapplied balances authorised to be expended on other objects under the 9th section of the Public Works Loans Act, 1881. The several amounts composing the sum of 14,848*l.* have by our direction been returned to the Loan Commissioners in pursuance of the provisions of section 4 of the 41 Vict. c. 18.

In the exercise of the duty imposed upon us by the Public Works Loans Acts of satisfying ourselves that moneys advanced by the Loan Commissioners have been properly applied, we have ascertained that in some instances a misappropriation of borrowed money has resulted from the practice of placing the loans in the same fund as that from which the ordinary expenses of the Local Authority are defrayed. We have also sometimes experienced much difficulty in obtaining accurate accounts of the application of loans in cases where the officer who was concerned in the expenditure of the money has died or ceased to be employed, the new officer being unable readily to distinguish what payments, made out of the general fund, related to the particular objects for which the loan was granted. Having regard further to the fact that the advances in question are made to Local Authorities in Scotland over whose accounts we have no jurisdiction, and to some in England with respect to whom we are in the same position, it was

considered desirable that a clause should be inserted in the Public Works Loans Bill of 1882 for the purpose of requiring a separate account to be kept by every Local Authority as regards moneys advanced to them by the Loan Commissioners on the security of a rate. Under this clause, which became law on the 18th of August 1882, it is now incumbent on all Local Authorities, to whom any money is advanced by the Public Works Loan Commissioners on the security of a rate, to cause their Treasurer to keep a separate account under the title of the Public Works Loan Commissioners Loan Account, or such other title as may be approved by us, and to cause all such advances to be carried to that account. The clause also provides that all orders or other documents directing payments out of such account must show on the face of them that the payment is to be made out of that account, and that no order or other document for a payment out of the account shall be made or given except for a purpose for which the advances were made.

It is hoped that the system established by the clause referred to will tend to check the misapplication of borrowed money and facilitate materially the examinations which we are required to make by the 36th section of the Public Works Loans Act, 1875.

Public Works Loans Act, 1882. Guarantee in respect of harbour loans.

Some important provisions are contained in section 7 of the Public Works Loans Act, 1882, which enable the Board of Trade, under certain conditions, to authorise by Provisional Order Urban Sanitary Authorities to charge any fund or rate under their control for the purpose of aiding Harbour Authorities in raising loans for the construction of harbours, piers, or other works within the meaning of the General Pier and Harbour Act, 1861. The section provides that the promoters of an order by which it is proposed to confer this power of guarantee on an Urban Authority shall before the order is settled submit to us a statement of the proposal; and if, having regard to the financial condition of the Urban Sanitary Authority, or to the necessity for such Authority to provide a water supply or drainage for their district, or otherwise to fulfil their original duties, we declare that in our opinion it is inexpedient to burden such Authority with any such guarantee it becomes the duty of the Board of Trade in settling the order to omit therefrom all provi-

sions relating to the guarantee. Towards the end of the year a proposal was submitted to us that the Local Board for the District of Whitby should be empowered by a Provisional Order under the section above mentioned to guarantee a loan of 10,000*l.* to the Whitby Port and Harbour Trustees for the improvement of the harbour. The matter was not, however, concluded at the expiration of the period to which this Report relates.

Notices to Commissioners no longer necessary.

By section 9 of the same Act, the 13th section of the Public Works Loans Act, 1875, has been repealed, and it is therefore no longer necessary for Sanitary Authorities to give notice to the Public Works Loan Commissioners on or before the 31st of December in each year of their intention to apply to the Commissioners for advances during the ensuing financial year. On the 6th November last we addressed a circular letter to the Sanitary Authorities of England and Wales (a copy of which is inserted at page 53 of the Appendix), drawing their attention to this alteration of the law.

Sanitary officers.

The number of Authorities who, with a view to the repayment out of the Parliamentary Grant of a moiety of the salaries, had, up to the 31st of December last, appointed Medical Officers of Health and Inspectors of Nuisances under our Regulations, (either separately or for combined districts) the appointments being then in existence, was as follows:—

Medical Officers of Health.

For Rural Districts - -	521
„ Urban „ - -	554
„ Port „ - -	27
Total - -	1,102

Inspectors of Nuisances.

For Rural Districts - -	514
„ Urban „ - -	454
„ Port „ - -	28
Total - -	996

This, it will be observed, is a slight increase upon the numbers mentioned in our previous Report. It is satisfactory to us to be able to state that a further reduction has taken place in the number of cases in which District Medical Officers are employed also as Medical Officers of Health, the objections to which arrangement we have pointed out on former occasions. We have, during the past year, availed ourselves of every opportunity of discouraging such a combination of offices.

In consequence of representations made to us with respect to the tenure of office of Medical Officers of Health, we have recently given the question generally our careful consideration. Hitherto it has been the practice to appoint the officers employed for single districts for short terms, usually not exceeding two or three years; but, with the experience which has been gained since the passing of the Public Health Act, 1872, of the nature and the extent of the duties devolving upon these officers, it appears to us that, under certain circumstances, we may now not improperly assent to a somewhat more extended term of office. In those cases, therefore, in which Sanitary Authorities have had some experience of the officer, and the arrangements have, in our opinion, proved, in all respects, satisfactory, we shall be prepared to entertain a proposal to re-appoint the officer for a longer term, provided he be not a Poor Law District Medical Officer.

Provisional Orders.

In the Appendix, p. 397, will be found statements with respect to the Provisional Orders issued by us during the year 1882, showing the sanitary districts, counties, and parishes to which they respectively related, their purposes and the titles of the confirming Acts. From these statements it will be seen that, in addition to the Orders issued under the Divided Parishes and Poor Law Amendment Act, 1876, as amended and extended by the Poor Law Act, 1879, which became Provisional and to which reference has already been made on p. xlv. of this Report, we issued 70 Provisional Orders under the Public Health Act, 1875, one under the Gas and Water Works Facilities Act, 1870, one under the Artizans and Labourers Dwellings Improvement Act, 1875, and one under the Highways and Locomotives (Amendment) Act, 1878.

From the list of the Acts for confirming Provisional Orders (Appendix, p. 402), it will be observed that 11 Acts related to the confirmation of the Orders under the Public Health Act, 1875, one to the confirmation of the Order under the Gas and Water Works Facilities Act, 1870, one to the confirmation of the Order under the Artizans and Labourers Dwellings Improvement Act, 1875, one to the confirmation of the Order under the Highways and Locomotives (Amendment) Act, 1878, and one to the confirmation of the Poor Law Orders which became Provisional.

The Bills (15 in number) for the several Acts for confirming these Orders, which contained in some instances special clauses relating to matters connected with the Orders, but with which we had no power to deal by the Orders, were prepared by us; they were submitted to Parliament at various dates between the 17th of April and the 25th of May 1882, and all the proceedings in Parliament connected therewith were taken at our instance.

Petitions in opposition to eight Orders were deposited in the House of Commons; in two instances, viz., the Sandal Magna Order, and the Bury No. 1. Order, the petitions were withdrawn upon clauses, to which our consent was given, being inserted; in one instance, the Newbury Order, a petition in opposition was deposited by the Great Western Railway Company, but was withdrawn upon their *locus standi* being objected to.

The confirmation of the Order for constituting the Godalming Main Sewerage District was opposed by the Corporation of the Borough of Godalming, but the opposition was withdrawn upon our agreeing to an alteration postponing the commencement of the Order from Michaelmas 1882 to 24th June 1883, in order to allow the Corporation the opportunity of promoting a Bill in the Session of 1883 for the extension of the Borough, which, if passed, would render the constitution of the Main Sewerage District unnecessary.

The Finchley Order, which proposed to allow the Finchley Local Board to take compulsorily part of the lands belonging to the Burial Boards of the Parishes of St. Mary Islington, and St. Pancras, for the disposal of sewage, was opposed by those Boards and others. The Order was not confirmed.

The Marsden Order which added the whole of the Local Government District of Marsden-in-Huddersfield to the Local Government District of Marsden-in-Almondbury was opposed by the Marsden-in-Huddersfield Local Board, but after being for two days before the Select Committee was confirmed without amendment.

The Upper Sedgley Order, which authorised the Upper Sedgley Local Board to carry out a Gas Undertaking, was opposed by the Town of Dudley Gaslight Company, upon theground that the Order was *ultra vires*, inasmuch as the Company were empowered to supply Gas within the suburbs of Dudley, which, the Company contended, included part of the District of the Local Board. The Select Committee did not adopt this view, but agreed to exclude from the operation of the Order a small portion of the District of the Local Board which was then supplied with gas by the Company.

The Workington Order which extended the boundaries of the Workington Local Government District was opposed by certain owners of property, and two Iron Companies in the added area, with a view (1) to a division of the District into three wards instead of two as proposed by us, and (2) to a division of the District for the purpose of charging the costs of works to be executed upon the different areas specially benefitted thereby. The increase in the number of wards was not objected to by us, but we declined to assent to the clauses proposed to be inserted to carry out the other proposal on the ground that we did not think it advisable to do by the Confirming Act what could be done by the Local Board themselves under the provisions of the Public Health Act, 1875. At the same time we intimated that we would not raise objection if the Select Committee thought the clauses should be inserted. The clauses were eventually inserted by the Select Committee.

The only Orders which were opposed in the House of Lords were those relating to Marsden and Upper Sedgley.

The Marsden Order, after being before a Select Committee for two days, was confirmed with the addition of a clause charging the debt of the Marsden-in-Almondbury Local Board upon the area which constituted the District of that Local Board before the date of the Order.

The Upper Sedgley Order was again opposed by the Town of Dudley Gaslight Company, but the Select Committee decided to confirm the Order with the insertion of a provision (to which the Upper Sedgley Local Board did not object) compelling the Local Board, before laying down mains or pipes for the supply of gas within the limits defined by the Order, to purchase, if required by the Company, all the mains, pipes, and apparatus for supply of gas belonging to the Company and lying within the limits of the Order at their prime cost, adding thereto the expense of placing them in position, the option to sell to be exercised within three months of the date of the Act confirming the Order.

Powers of compulsory purchase.

Thirty-two of the Provisional Orders were issued to enable the Sanitary Authorities on whose applications they were granted to put in force, with reference to the lands described in the schedule to the Orders, the powers of the Lands Clauses Consolidation Acts, 1845, 1860, and 1869, with respect to the purchase and taking of lands otherwise than by agreement. By these Orders we have authorised the compulsory acquisition of lands for the purposes of works of sewerage, sewage disposal, water supply, and street improvement, for the erection of a hospital and a mortuary, the provision of offices, the construction of bridges, and the formation of a new street.

Repeal and alteration of Local Acts and Confirming Acts.

During the year we issued 26 Provisional Orders which, being afterwards confirmed by Parliament, had the effect of repealing or amending provisions in Local Acts, and amending confirming Acts of previous Sessions. These Orders were made in pursuance of the powers conferred upon us by sections 303 and 297 of the Public Health Act, 1875.

In some instances these Orders give borrowing powers in addition to those previously exerciseable by the Sanitary Authorities. The extent and purposes of these additional powers may be gathered from the following statement:—

Name of Authority.	Amount.	Object of Loan.
	£	
Ashton-under-Lyne Corporation.	30,000	New Street Expenses.
Birmingham Corporation -	- - -	Loans to Guardians, School Board, and Drainage Board.
Lytham Improvement Commissioners.	5,800	Gasworks.
Rochdale Corporation -	100,000	Waterworks.
Salford Corporation - -	98,000	Gasworks.
	23,600	General Purposes.
	10,000	Ditto.
	20,000	Ditto.
Smethwick Local Board -	75,000	Gasworks.
Sowerby Bridge - -	5,000	Waterworks.
Stafford Corporation - -	16,000	Gasworks.
Walsall Corporation - -	50,000	Gasworks.
York Corporation - -	4,700	Markets and Fairs.

Orders of this description necessarily comprise provisions dealing with a great variety of subjects; but the more important matters which came within the scope of the Orders issued during the year ended on the 31st of December 1882 are enumerated in the subjoined paragraphs.

By an Order dated the 5th of May 1882, and applicable to the Borough of Birmingham, we amended a Local Act of 1851, so as to provide that any three or more persons assembled together in any part of a street within the borough for the purpose of betting should be deemed to be obstructing the street.

The Surbiton Improvement Act of 1855 was partially repealed and altered by an Order of the 26th of April 1882. Among other provisions, the Order had reference to an amendment of the description of the District; to the accounts of the Commissioners and their audit; to the rules relating to the qualification, nomination, election, continuance in and retirement from office of the Commissioners, and to the filling up of casual vacancies; and to the mode of advertising notices as to the affairs of the District.

By an Order of the 27th of April 1882 affecting Local Acts in force in the Borough of Wigan, we enabled the Corporation, on the land described in the Order, to erect, construct, maintain, alter, remove, or enlarge retorts, gasholders, receivers, meters, apparatus, and works for the purposes of their gas undertaking, and to provide all proper roads, approaches, and conveniences; and to

make, manufacture, and store gas, coke, coal tar, pitch, asphaltum, ammoniacal liquor, sulphate of ammonia, oil, and all other refuse, or residual products of the manufacture of gas or of the materials used therein. We also enabled the Corporation to make, buy, or hire, and to supply, sell, or let on hire to consumers for use upon their premises burners, tubes, ovens, and stoves, or ranges for heating and cooking by gas, with other materials or fittings for the use of gas; and also engines or machines to be worked by gas and materials or fittings to be used in connexion therewith.

By an Order of the 9th of May 1882 the Torquay Local Board of Health were empowered to make bye-laws for the regulation of public bathing without the use of machines, and to charge for the use of open bathing places, bathing stages, bathing sheds, towels and drawers. Section 3 of the Confirming Act (45 & 46 Vict. c. lxii.) further authorised the making of byelaws "for requiring "the owners or persons in charge of bathing machines to "provide such boats and other apparatus as may appear "to the Torquay Local Board of Health to be expedient "for the purpose of saving life," and "for fixing the "places at which such life saving apparatus shall be "deposited, and the times when and the limits within "which such boats shall be in attendance."

On the application of the Worthing Local Board of Health, we inserted in an Order dated the 10th of May 1882 provisions enabling them to license and regulate omnibuses, waggonettes, and other carriages plying for passengers to be carried for hire at separate fares, and the drivers and conductors of such vehicles.

An Order of the 16th of May 1882, issued at the request of the Ashton-under-Lyne Corporation, amended certain Local Acts in force within the Borough, and contained various important provisions with regard to loans for new street expenses. By these provisions the Corporation are required to pay off the moneys borrowed by them within 40 years from the dates of borrowing by equal yearly or half-yearly instalments of principal or of principal and interest, or by a sinking fund. Separate accounts of all moneys expended and recovered in respect of new street expenses are to be kept. The sums so recovered are to be applied to the payment of the interest on the loans, and of the amounts required to be paid as instalments or to be set aside as sinking funds;

the residue of the moneys being rendered applicable to defraying new street expenses, or to the credit of the sinking fund. In the event of the moneys recovered in any year being insufficient to pay the interest and the amounts required to be paid as instalments or to be set aside as sinking funds, the deficiency is to be paid out of the Borough Fund.

The Bethesda Improvement Commissioners, by an Order dated the 17th of May 1882, were authorised to license and regulate wheeled carriages of whatever form or construction used in standing or plying for hire within a radius of five miles from the Post Office, but not within the Local Government District of Bangor. Other provisions of this Order had reference to the rules affecting the qualification, election, and retirement of Commissioners, to the repeal or alteration of parts of the Local Act relating to gas, water, the rates leviable in the District, the expenses of the execution of the Local Act, and the rates or funds chargeable as security for loans.

By an Order of the 13th of May 1882, applicable to the District of Pemberton, we amended certain provisions of the Local Acts operative within the District, and by such amendments authorised an extension of the time for completion of a water reservoir, conduit, watercourse, or line of pipes forming part of the water undertaking of the Local Board.

In an Order of the 17th of May 1882, affecting Local Acts in force in the Borough of Rochdale, we embodied enactments dealing with the purchase of lands, the borrowing of money, and the levying of rates for hospital purposes; the regulation of the area of sites of new dwelling houses; the separation by walls of the yards of such houses; the provision of receptacles for soil and ashes; the area and height of rooms; the basis of water rates; and the acquisition of rights and interests in springs, streams, or waters.

An Order of the 16th of May 1882, issued at the instance of the Corporation of Salford, amended the existing Local Acts in many particulars. The matters to which this Order had reference include the utilization, manufacture, and sale of the residual products of gas; the requirement of security from intending consumers of gas; the notices to be given before the discontinuance of a supply of gas; agreements with owners with respect to the

construction of new streets, highways, sewers, and drains, with respect to the inspection, repair, demolition, alteration, or reconstruction of insanitary buildings, to the execution of work by the Corporation, and to the expenses incurred in relation to the subjects of such agreements; the fees for and the duration of the licences of hackney carriage drivers, and of porters and drovers; market tolls; and regulations as to the notification of infectious diseases and the prevention of their spread.

The Order of the 25th of May 1882, applicable to the District of Workington, to which we have already alluded, contained provisions for the division of the District into Wards for the election of members of the Local Board; for the conduct of elections, the retirement of members, casual vacancies, and the constitution of the Local Board; for the extension of the District, and for the levying of rates in the area originally comprised in the District, to defray the unpaid balance of loans.

Gas and Water Works Facilities Act, 1870.

The Provisional Order, which was confirmed by Parliament during the year, authorising a gas undertaking under the Gas and Water Works Facilities Act, 1870, has already been referred to. It was issued in accordance with an application made to us by the Upper Sedgley Local Board. The Local Board had agreed, subject to our sanction and prior to the date of the Order, to purchase the undertaking of an existing gas company which had been registered under the Companies Clauses Act, 1862, and was supplying gas within the district. By our Order we empowered the Local Board to construct and maintain gasworks and to manufacture gas and residual products on certain specified lands; to supply gas for public and private purposes; and to dispose of the residual products at the works and elsewhere.

The provisions of this Order are generally similar to those contained in the Bridgnorth Order, which was referred to at length in our last Report; the Local Board are not, however, empowered, like the Corporation of Bridgnorth, to mortgage the lands, works, and other property possessed by them for the purposes of their gas undertaking.

Extension of municipal borough.

A Local Act, entitled the Hull Extension and Improvement Act, 1882, provided for the extension of the municipal borough of Kingston-upon-Hull on the 31st

of March 1883, so as to include for municipal and sanitary purposes the whole of the Local Government District of Newington, part of the Local Government District of Cottingham, the parish of Marfleet and a part of the parish of Sutton-with-Stoneferry. We were required by this Act to settle the number, names, or distinguishing numbers, and boundaries of the wards of the extended borough, and to allocate the existing Councillors among the new wards, and we have issued an Order for that purpose, based on the report of the Commissioner appointed by us under the provisions of section 21 of the Act.

Constitution and alteration of Local Government districts.

We have by Provisional Order enlarged five Local Government Districts. The titles of the Acts by which these Orders have been confirmed are set out in the Appendix, p. 396, where the names of the districts, the counties in which they are respectively situate, and a description in each case of the area added are also given.

By two of the Orders, viz., those extending the districts of South Blyth and Workington, we divided the districts into wards for the purposes of the election of members, and in the latter case we increased the number of members of the Local Board. By the Workington Order it was provided that the original district should remain liable for the repayment of the balance remaining unpaid of certain debts incurred by the Local Board for the construction of permanent works.

We have issued Orders constituting new Local Government Districts in pursuance of resolutions which had been passed by ratepayers and owners of property in Arlecdon and Frizington, Barking Town, Biddulph, Rishton, and Sutton. The Appendix, p. 395, contains a statement showing the areas included in these districts. and the counties in which they are situate.

Charters of Incorporation have been granted to the Towns of Bacup and Keighley during the past year, the effect of which has been to dissolve the Local Boards of those Districts.

Alterations of Improvement Act districts.

One Improvement Act District—that of West Bromwich—has also ceased to exist in consequence of the grant of a Charter of Incorporation to the town. Another, viz. the Improvement Act District of Fleetwood, has been extended by a Provisional Order.

Adjustment of interests.

We have issued 10 Orders of adjustment in the course of the year, under section 304 of the Public Health Act, 1875. Six of these were rendered necessary by the formation of new Local Government Districts at Bexley, Claines, Dorking, and Wath-upon-Dearne, and five by the extension of the Districts of Cleator Moor, Dalton-in-Furness, Mountain Ash, Pontypridd, Shirley, Teignmouth, and Ystradyfodwg.

United districts.

We have constituted three United Districts during the year by means of Provisional Orders under section 279 of the Public Health Act, 1875. Two of these Districts, viz., the Staines Joint Hospital District, which comprises the Urban Sanitary District of Staines and the Rural Sanitary District of the Staines Union; and the Uxbridge Joint Hospital District, which includes the Urban Sanitary District of Uxbridge and the Rural Sanitary District of the Uxbridge Union, have been formed for the purpose of providing and maintaining hospitals for the use of the inhabitants of the constituent districts. In the latter case a common hospital had already been erected by the Constituent Authorities under section 131 of the Public Health Act, and the Order vested this hospital in the Joint Board, and empowered them to fit up, furnish, maintain and manage it. The Orders prescribed in both instances that the governing body should consist of two ex-officio and seven elective members, representing the several Constituent Authorities, and they contained the usual provisions as to the modes in which persons should be admitted into any hospital belonging to the governing body, and as to the manner in which the expenses incurred should be defrayed.

The third United District was formed for the purpose of making a main sewer and works of sewage disposal for the borough of Godalming and three contributory places in the Rural Sanitary District of the Guildford Union. The Joint Board for this United District consists of two ex-officio and eight elective members.

Urban powers conferred on Rural Sanitary Authorities.

We have issued 48 Orders during the year under section 276 of the Public Health Act, 1875, conferring upon Rural Sanitary Authorities, as regards the whole or parts of their districts, powers contained in certain provisions of that Act in force in Urban Districts. In the Appendix, p. 436, will be found a tabular statement

containing the names of the Rural Sanitary Authorities who have been invested with these powers during the year, the sections of the Public Health Act, 1875, which have thus been put in force, and the districts and places to which they have been applied.

There has been no diminution in the number of applications for urban powers, although we had at the commencement of the year issued no less than 396 Orders conferring such powers on Rural Sanitary Authorities. The number of Orders of this character which we have issued since the passing of the Public Health Act, 1872, which first enabled them to be made, has now, as will be seen, reached the large total of 444. Before acceding to applications made to us for urban powers, we have been careful to satisfy ourselves that the particular sections of the Public Health Act, 1875, which the Sanitary Authorities desired to have put in force, were rendered necessary by the circumstances of the locality, and that the authorities were likely to exercise the powers thus given to them. The urban powers which we have most frequently had occasion to confer upon Rural Sanitary Authorities are those contained in sections 42, 44, 157, and 158 of the Public Health Act, 1875, with regard to the cleansing of streets and the making of byelaws for the prevention of nuisances, and with respect to new streets and buildings.

Byelaws as to houses let in lodgings.

By notice published in the London Gazette, we have declared the enactment contained in section 90 of the Public Health Act, 1875, to be in force within the districts of the Urban Sanitary Authorities of Benwell and Fenham, Croydon, Edmonton, Gloucester, Heston and Isleworth, Ramsgate, and St. Helen's (Isle of Wight), and within four contributory places in the Rural Sanitary District of the Whitchurch Union, for the purpose of empowering the Authorities to make byelaws for fixing the number of persons who may occupy houses let in lodgings, for the separation of the sexes, for the registration and inspection of such houses, and for their drainage and cleansing.

Special drainage districts.

We have given our approval during the year to resolutions passed by the Rural Sanitary Authorities of the Guildford, Whitehaven, and Wimborne and Cranborne Unions for the constitution of special drainage districts,

comprising portions of the areas within the respective jurisdictions of such Authorities. At p. 439 of the Appendix will be found a statement showing the districts, and the dates on which they were constituted.

We have also issued Orders dissolving special drainage districts in the Guildford, Horsham, and Wimborne and Cranborne Unions, particulars of which are given on the same page of the Appendix. No loan had been raised for the execution of sanitary works in any of these districts.

Regulation of steam whistles.

Under the powers conferred upon us by the 35 & 36 Vict. c. 61, we made an Order revoking a sanction which had been granted by the Rural Sanitary Authority of the Lichfield Union to the use by the Trent Valley Brewery Company of a steam whistle at their Brewery at Streethay. Complaint had been made to us by persons owning or occupying houses in the neighbourhood that they were prejudicially affected by the sanction given by the Sanitary Authority, and, after having caused a local inquiry to be held in the matter by one of our Inspectors, we came to the conclusion that the complaint was well founded.

Defaulting Authorities.

Before referring to the complaints under section 299 of the Public Health Act, 1875, which have been made to us during the year, we may state briefly what has been done in those cases of default by Local Authorities which were not finally disposed of when we had occasion to mention them in our last Annual Report.

In the case of the default of the Rural Sanitary Authority of the Wem Union in providing the Wem Special Drainage District with a proper supply of water, we have the satisfaction of reporting that the Authority have submitted to us plans of a scheme for a water supply for the Special Drainage District, and that we have promised sanction to the loan for which the Authority have applied in order to carry out the works, provided that certain amendments which we have proposed in the plans are adopted by them.

After further correspondence with the Ely Local Board with respect to the water supply of their district, in reference to which complaint of default had been made to us, we felt it incumbent upon us to issue an Order limiting a time for the commencement of the necessary works.

We are glad to be able to state that the Newquay Local Board, whom we required by Order to perform their duty in the matter of sewerage, have submitted to us plans of a scheme which appears to us to be calculated to remove all cause of complaint.

We have issued the Provisional Order applied for by the Town Council of Newbury to enable them to acquire by compulsory purchase the lands required for the disposal of the sewage of the Borough, and we trust that the Town Council will shortly be in a position to apply to us for sanction to a loan for the execution of their scheme.

In the case of the default of the Cheshunt Local Board in providing Waltham New Town with sufficient sewers, we have found it necessary to issue an Order limiting a time for the performance of the duty of the Sanitary Authority in the matter.

We stated in our last Report that we had allowed time to the Henley Local Board, as to the sewerage of whose district a complaint of default had been made, in order that they might obtain skilled advice as to the measures which should be taken for placing the district in a satisfactory state. The Local Board have since consulted an Engineer in the matter, but no active steps have yet been taken for improving the condition of the district.

The Guardians of the Newport (Monmouth) Union made complaint in February last that the Caerleon Local Board had failed to provide the town of Caerleon with a sufficient supply of water. The object of the Guardians was to obtain a supply of water to their Schools at Caerleon, and this object they have since attained by agreement with the Newport Waterworks Company. The Local Board have also entered into negociations for the supply of the town by the Water Company.

A complaint has also been addressed to us during the past year, alleging default on the part of the Little Hulton Local Board in respect of sewerage. The result of our investigation in this case has been to convince us that the allegation was well founded, and the Local Board have undertaken to submit to us a scheme of sewerage without delay.

Complaints having been made to us by the London and North-Western Railway Company that the Rural Sanitary Authority of the Holywell Union had made

default in providing Bagillt and Connah's Quay with sufficient sewers, we directed inquiries to be held. We understand that the Sanitary Authority are taking steps for the removal of the cause of complaint in each case.

An inquiry was also held at Staines by our direction into a complaint that the Local Board had made default in providing their district with sufficient sewers. At the inquiry the Local Board admitted the default, and they have since called in an Engineer to advise them as to the scheme of sewerage to be adopted.

Another inquiry was held respecting a complaint that the Rural Sanitary Authority of the Hawarden Union had failed to provide the Parish of Hawarden with a proper supply of water. We found that the Parish was in urgent need of such a supply, but we have deferred proceeding further in the matter in consequence of the proposed supply of the district by a new Water Company.

A complaint was also addressed to us by a large number of owners and ratepayers of the Parish of Sutton that the Rural Sanitary Authority of the Epsom Union had made default in providing sufficient sewers for that parish, and in enforcing other provisions of the Public Health Act, 1875. After considering the Report which our Inspector made respecting his inquiry on the subject, we called upon the Authority to provide an efficient scheme of sewerage at the earliest possible date. We have since constituted the Parish a Local Government District in pursuance of a resolution of the owners and ratepayers.

Port Sanitary Authorities.

At page 431 of the Appendix will be found a list of the Port Sanitary Authorities of England and Wales as existing at the end of last year, with a description of the extent of their respective jurisdictions. Where they have been temporarily constituted, the period during which their powers continue in force terminates on the 25th of March. In three cases, however, in which we issued Provisional Orders constituting permanently Port Sanitary Authorities which had previously been continued temporarily from year to year, we issued Orders continuing the temporary arrangements for six months, *i.e.*, until the 29th September 1882, in order to allow time for the Provisional Orders to be issued and confirmed by Parliament.

The number of Port Sanitary Authorities in existence on the 31st December last was 46, of which 34 had been constituted temporarily. Of the others the Corporation were constituted the Authority of the Port of London by the Public Health Acts, 1872 and 1875, and the remaining 11, being the Authorities of the Ports of Cardiff, Hartlepool, Harwich, Liverpool, Lowestoft, Milford, Plymouth, River Tyne, Sunderland, Weymouth, and Wisbeach have been permanently constituted by Provisional Orders issued by us from time to time under the Act above mentioned, or under section 287 of the Public Health Act, 1875, and confirmed by Parliament.

The three Authorities which have been constituted permanently by us during the year were those of the Ports of Cardiff and Plymouth, and that of Newcastle with part of the Ports of North and South Shields. In the case of the Port of Cardiff we constituted the Town Council of Cardiff the Port Sanitary Authority, and we provided that the expenses incurred by the Authority should be shared between the Town Council of Cardiff, the Penarth Local Board, and the Rural Sanitary Authority of the Cardiff Union, according to the proportions named in the Order. By the Plymouth Order we provided that a Joint Board should be constituted, consisting of nine representative members to be chosen by the members of the following Riparian Authorities, viz., the Town Councils of Devonport and Plymouth, the Local Board of East Stonehouse, and the Rural Sanitary Authorities of the Plympton St. Mary and St. German's Unions, and that the expenses incurred by the Joint Board should be defrayed out of a common fund to be contributed by the several Riparian Authorities in the following proportions, viz., by the three Urban Authorities in proportion to the rateable value of the property in their respective Districts, and by the two Rural Authorities in proportion to one half of the rateable value of the property in such of the parishes within their District as abut on the part of the Port over which the Joint Board have jurisdiction.

The third Provisional Order constituted the Port of Newcastle and parts of the Ports of North and South Shields a Port Sanitary District under the jurisdiction of a permanent Port Sanitary Authority under the name of the River Tyne Port Sanitary Authority. The Joint Board forming this Authority consists of 15 represen-

tative members, six of whom are to be chosen by the Town Council of Newcastle-upon-Tyne, two each by the Town Councils of Gateshead, South Shields, and Tynemouth, one by the Town Council of Jarrow, one jointly by the Felling and Hebburn Local Boards, and one jointly by the Local Boards of Howdon, Walker, Wallsend, and Willington Quay. The Order directs that the expenses of the Joint Board shall be defrayed out of a common fund to be contributed by the various Riparian Authorities in proportion to the amounts which at the time when the precepts of the Joint Board are issued would be raised in the Districts of the Riparian Authorities respectively by a General District or other similar rate.

Some slight changes in the temporary Orders have become necessary in consequence of the constitution of the Customs Ports of Chepstow, Deal, and Hayle having been annulled by warrants issued by the Lords Commissioners of Her Majesty's Treasury. As regards the Port of New Shoreham, we thought it desirable to make the Rural Sanitary Authority of the Steyning Union the Port Sanitary Authority instead of the New Shoreham Local Board, and in the case of the Port of Newhaven we made the Newhaven Local Board the Port Sanitary Authority for the part of the Customs Port abutting on the Local Government District of Newhaven.

The expenditure of the Port Sanitary Authorities for the last three years has been as follows:—

	£
Year ended 25th March 1880	- 9,009
„ „ 1881	- 6,654
„ „ 1882	- 9,036

The expenditure has for the most part been in the salaries of officers, the provision of hospitals, the maintenance of patients, the removal of nuisances, and the disinfection of ships.

The amount of the outstanding loans of these Authorities on 25th March 1882 was 5,042*l.*

Appeals against decision of Local Authority.

It is provided by section 268 of the Public Health Act, 1875, that where any person deems himself aggrieved by the decision of the Local Authority in any case

in which the Authority are empowered to recover in a summary manner any expenses incurred by them, or to declare such expenses to be private improvement expenses, he may within twenty-one days after notice of such decision address a memorial to us stating the ground of his complaint, and we are empowered to make such order in the matter as may seem equitable to us. During the past year four Orders of this description have been issued by us, dealing with appeals brought against decisions of the Leigh, Longton, Widnes, and Withington Urban Sanitary Authorities.

The question at Withington was, whether the owners should be required to pay the expense of a sewer the construction of which was expedient in the interest of the neighbourhood, but which was more costly than was necessary for the effectual drainage of the particular properties owned by the appellants. We considered that it would be equitable for the owners to pay one-half of the cost of the sewer in question, and issued an Order accordingly.

We decided in the Widnes case that the amount claimed by the Local Board—some small items for interest and establishment charges being deducted—was such as the appellants ought equitably to pay, and in the Leigh case we disallowed a charge which the Urban Authority had made for interest accruing prior to the date of the demand served on the appellant.

By the remaining Order which we issued under section 268 we confirmed a decision of the Town Council of Longton.

In many instances where appeals have been made to us under the section, it has not been necessary for us to issue an Order, and in others, by reason of informalities on the part of the appellants, we have had no power to adjudicate. There are also some cases in which the appeals were received prior to the end of the year 1882 and where our decision has not yet been given.

Of this last class one, viz., that of a memorial addressed to us by an owner appealing against a decision of the Penarth Local Board, calls for special notice. After the appeal had been made, the Queen's Bench Division of the High Court of Justice were moved to prohibit the appellant from proceeding further in

the matter, on the ground that he had allowed more than three weeks to elapse without appealing against the decision of the Local Board. The main points determined by the Court, who upheld the right of the owner to appeal, were that neither a notice to an owner to execute works under section 150 of the Public Health Act, nor a notice of apportionment under section 257, could be held to be a "decision" within the terms of section 268, but that a demand for payment of the sum named in the notice of apportionment was such a decision; that the validity of the appeal was not affected by the fact that the memorial of the appellant did not accurately state the ground of complaint; and that we could not be prohibited from entertaining the appeal on the ground that we might perhaps take into consideration matters not adverted to in the appeal.

The Court of Appeal confirmed the decision of the Queen's Bench Division, and the matter is now being dealt with by us.

Public Health (Water) Act, 1878.

Under the Public Health (Water) Act, 1878, we are empowered, where application is made to us by any Sanitary Authority under section 62 of the Public Health Act, 1875, to determine what is a reasonable cost within the meaning of that section, to fix a general scale of charges for the whole or any part of the district of the Authority. We have fixed 16 such scales during the year on the applications of the Urban Sanitary Authorities of Birkenshaw, Chippenham, Crewe, Keswick, Midsomer Norton, and North Bierley, and the Rural Sanitary Authorities of the Alnwick, Burton-upon-Trent, Chesterfield, Kendal, Merthyr Tydfil, Nantwich, Pateley Bridge, Settle, and Skipton Unions.

Appeal may be made to us under section 4 of the Act of 1878 in cases where an owner of a house has been required by a Rural Sanitary Authority to provide a supply of water for his house, and objects to such requirement on the ground that the Authority ought themselves to provide a supply of water for the district or contributory place in which the house is situate or to render the existing supply of water wholesome, or on the ground that the whole or part of the expense of providing the supply or of rendering the existing supply wholesome, ought to be a charge on the district or con-

tributory place. Where memorials containing such objections are addressed to the Authority within a limited time, it devolves on the Authority to forward a copy of the memorial to us, and we are empowered by section 4 of the Act to cancel the requirement of the Authority, or to confirm the same with or without modifications. The section further provides that if we cancel the requirement of the Authority on the ground that they ought themselves to furnish a supply for the district or contributory place in which the house is situate, or to render the existing supply wholesome, the memorial shall be deemed to be a complaint of default under section 299 of the Public Health Act, 1875.

The appeals of this class which have hitherto been brought under our notice have not been numerous, the only case in which we have issued an Order under section 4 during the year being that of Ryther-with-Oxendyke, in the Rural Sanitary District of the Tadcaster Union, where we confirmed the requirement of the Sanitary Authority. In the case of the memorial of an owner at Bishopsteignton, we have intimated to the Rural Sanitary Authority of the Newton Abbot Union that in our opinion they ought themselves to provide a supply for the village, and we are in communication with them with regard to the steps which should be taken with this object.

Public Health (Interments) Act, 1879.

Under the Public Health (Interments) Act, 1879, by which Urban and Rural Sanitary Authorities are empowered to provide and maintain cemeteries, we have during the past year sanctioned the raising of loans by the Urban Sanitary Authorities of the Districts of Astley Bridge, Broseley, Chipping Norton, Edmonton, Hove, Long Eaton, Newtown and Llanllwchaiarn, North Bierley, Ryton, Stretford, and Willington, and the Rural Sanitary Authorities of the Barnsley, Basford, Chesterfield, Horncastle, Huntingdon, Selby, and Stamford Unions. In the case of Rural Districts we have declared the cost of the cemeteries to be chargeable as special expenses upon the contributory places for which they were provided. The total amount of which we have sanctioned the borrowing during the year has been 43,938*l.*, of which 37,085*l.* was for cemeteries in the Urban and 6,853*l.* for those in the Rural Sanitary Districts. The

total amount sanctioned by us since the Act came into operation on the 21st July 1879, has been 75,801*l.*

Municipal Corporations (Borough Funds) Act, 1872.

We have during the year given our approval under the 4th section of the Municipal Corporations (Borough Funds) Act, 1872, in respect of matters within our jurisdiction to the resolutions of various Urban Authorities to promote local Bills in Parliament in 23 cases, and to oppose Bills in Parliament in 100 cases.

A written statement of the grounds of the proposed promotion or opposition, and a statutory declaration proving compliance with the requirements of the Act, have in every case been furnished to us before our consent has been given.

Local inquiries.

A list of the special inquiries and inquiries on applications for sanction to loans by Sanitary Authorities which have been held during the year by our Engineering Inspectors, and our Inspector of Local Loans and Local Acts, will be found at p. 410 of the Appendix. The date and subject of each inquiry and the name of the district to which it related, and of the Inspector holding it, are also given. The total number of special inquiries appearing in the list is 188, and that of the inquiries as to loan sanctions 299.

The inspections by our Medical Inspectors, to which reference is made hereafter, are not included in this statement.

Local Acts.

In the Appendix, p. 405, will be found a list of the Local Acts promoted during the last Session by Urban Sanitary Authorities, and also a list of the Local Acts so promoted by Gas and Water Companies in England other than Metropolitan Companies. The former list comprises 27 Acts, and the latter 23.

In addition a local Act was promoted by the Lower Thames Valley Main Sewerage Board.

Private Bills.

In accordance with our usual practice we caused such of the Private Bills of the last Session as related to matters coming within our jurisdiction to be carefully examined, and made reports to Parliament with respect to such of them as contained provisions which appeared to be open to objection, or to require modification. The reports thus made were 56 in number, and related to

Bills, 23 of which were promoted by the Corporations of Municipal Boroughs, five by other Sanitary Authorities, two by County Authorities, two by Poor Law Authorities, one by the Lower Thames Valley Main Sewerage Board, 19 by Water or Gas Companies, and four by Railway and other Companies.

Seven of the Bills on which we thus reported, viz., those promoted by the Corporations of Accrington, Blackburn, Bolton, Chadderton, Macclesfield, Manchester, and Newcastle-upon-Tyne were referred to a Select Committee of the House of Commons appointed to consider and report on any provisions in Private Bills promoted by Municipal and other Local Authorities, by which it was proposed to create powers relating to police or sanitary regulations which deviated from or were in extension of or repugnant to the general law. This Committee subsequently made a special report to the House in respect of these Bills.

On reference to this report we found that the views of the Committee on some important points were in accordance with the recommendations which have for many years past been contained in our reports on Private Bills. For example, they refused to assent to a large number of clauses proposing to give powers which might already be obtained by means of Byelaws under General Acts; they in no case permitted the repayment of a loan to be extended beyond the period of 60 years, and in several instances they thought it expedient to subject the raising of loans required for the purposes of the Bills to our sanction, as is required in the case of moneys borrowed under the Public Health Act, 1875. The recommendations of the Committee with respect to the exceptional powers sought for in some of these Bills in relation to the prevention of infectious disease will be referred to in a later part of this Report.

Some of the above Bills, and several other Bills promoted during the last Session by Local Authorities contained clauses for powers enabling the Local Authorities to convert the whole of their existing loans into stock charged indifferently on all the rates leviable by, and all the funds and revenues belonging to them and authorising them to raise their future loans by the issue of the same stock. The clauses conferring these powers were of a very elaborate character, and in many respects differed from those contained in the Private Bills of

former years, and in the Metropolitan Board of Works Loans Acts.

In connection with the Private Bills of the last Session, we may mention that by a new Standing Order of the House of Commons (No. 173 a.) some important regulations have been made with respect to Bills promoted by or conferring powers on Municipal Corporations or other Local Authorities, or public bodies having powers of local government or rating. In the case of any of these Bills, the Committee on the Bill are required by the Order to consider the clauses of the Bill with reference to the following matters:

(*a.*) Whether the Bill gives powers relating to police or sanitary regulations in conflict with, deviation from, or in excess of the provisions or powers of the general law.

(*b.*) Whether the Bill gives powers which may be obtained by means of Byelaws made subject to the restrictions of General Acts already existing.

(*c.*) Whether the Bill assigns a period for repayment of any loan under the Bill exceeding the term of 60 years, which term the Committee may not in any case allow to be exceeded, or any period disproportionate to the duration of the works to be executed or other objects of the loan.

(*d.*) Whether the Bill gives borrowing powers for purposes for which such powers already exist, or may be obtained under General Acts, without subjecting the exercise of the powers under the Bill to approval from time to time by the proper Government Department.

And the Committee are required to report specially to the House:—

In what manner any clauses relating to the several matters aforesaid have been dealt with by the Committee; and

Whether any report from any Government Department relative to the Bill has been referred to the Committee; and

If so, in what manner the recommendations in that report have been dealt with by the Committee; and

Any other circumstances of which in the opinion of the Committee it is desirable that the House should be informed.

Artizans and Labourers Dwellings Improvement Act, 1875.

We sanctioned during the year the borrowing by the Corporation of Birmingham of 100,000*l.* for the purpose of enabling them to carry out their improvement scheme, under the Artizans and Labourers Dwellings Improvement Act, 1875, which was confirmed by us in 1876, and to which reference has been made in our previous Reports. The total amount which we have authorised to be borrowed under this Act was, on the 31st December last, 1,978,374*l.*, which is composed of the following sums, viz.:—

District.	Amount sanctioned.
	£
Birmingham - -	1,600,000
Liverpool - - -	50,000
Norwich - -	10,000
Swansea - - -	121,000
Walsall - - -	15,000
Wolverhampton - -	182,374
Total - -	1,978,374

We have recommended the Public Works Loan Commissioners to advance the whole of this amount, with the exception of 57,374*l.*

We have during the year confirmed a scheme of the Corporation of Nottingham under the Artizans and Labourers Dwellings Improvement Act, 1875, for the improvement of an unhealthy area in that borough. By this scheme the Corporation proposed to lay out and complete one or more new streets in the area to which it related, and to dispose by public auction of the rest of the area for the purpose of erecting thereon dwelling-houses, shops, and manufacturing, commercial, or public buildings; or, instead of laying out streets and selling the remainder of the area for building purposes, to dispose of the whole of the land within the area for the construction thereon of railways and auxiliary works, and the erection of a railway station. The cost of

carrying out the scheme was estimated by the borough surveyor at 84,500*l.*, and of this amount the Corporation expect to recover 49,000*l.* by the re-sale of surplus lands. The area to which the scheme related is 12,813 square yards; the number of artizans' dwelling-houses in the area is 104 and the population therein about 400; the total population in the area being 473. The land on which the Corporation proposed to furnish accommodation for the persons displaced by the execution of the scheme is a portion of their Bridge Estate situated at a distance of about a mile from the unhealthy area.

In confirming the scheme, we defined the portion of the lands included in it which should be taken to represent the unhealthy area, and specified the purposes for which the lands outside such area were included in the scheme. We also required that the part of the Bridge Estate referred to in the scheme should be set aside for the accommodation of the persons of the working class displaced, and that no part of the area to which the scheme related should be cleared of buildings until accommodation had been provided on that estate for such persons.

Rivers Pollution Prevention Act, 1876.

During the past year we have, in compliance with applications made to us by various Sanitary Authorities, issued six Orders suspending for limited periods the operation of section 3 of the Rivers Pollution Prevention Act, 1876, which prohibits the discharge of sewage into streams.

Two of these Orders were granted for the protection of the Rusholme Local Board from liability to proceedings in respect of the pollution of a certain stream by sewage from their district. The Local Board were actively proceeding with the preparation of their scheme of sewage disposal, but we were informed that the works could not actually be commenced until the spring of the present year.

We also issued two Orders protecting the Tyldesley-with-Shakerley Local Board from liability to proceedings as regards the discharge of sewage into the Moss Ditch and Hindsford Brook, and one protecting the Town Council of Rochdale from similar proceedings as regards

the River Roach and its tributaries. At both of these places works for the disposal of the sewage are in progress.

On the assurance of the Rural Sanitary Authority of the Aston Union that the works for the disposal of the sewage of Sutton Coldfield, which was then being discharged into Plant's Brook, were in active progress, we issued an Order extending for six months the period of immunity from proceedings under section 3 as regards the discharge of sewage into that stream. This Order expired on the 30th January last, and no renewal of it has been applied for by the Sanitary Authority.

In continuation of what was stated in our last Report with respect to the alleged serious pollution of the River Lostock by manufacturing refuse, we may mention that application has been made to us by the Rural Sanitary Authority of the Chorley Union for consent to proceedings being taken under Part III. of the Act against a Company owning Bleaching and Printing Works, and the proprietor of Calico Printing Works for polluting the stream in question. We issued an Order consenting to proceedings being taken against the Company, but having been informed that measures were being taken by the proprietor of the latter works with the view of stopping the pollution of the river by refuse therefrom, we have for the present declined to sanction proceedings being taken against him.

On an application made to us by the Rural Sanitary Authority of the Wakefield Union, we gave our consent to proceedings being taken under Part III. against a firm of dyers at East Ardsley for polluting a stream known as the Dolphin Beck with refuse from their dye works.

In both of the above cases we have, as required by section 6 of the Act, had regard to the industrial interests involved, and to the circumstances and requirements of the locality, in considering whether our consent should be given or withheld.

The number of counties and boroughs in which we have approved of the appointments of analysts, under Sale of Food and Drugs Act, 1875.

the Statutes 35 & 36 Vict. c. 74., and 38 & 39 Vict. c. 63., is as follows:—

Counties - - - -	52
Boroughs under section 10 - -	164
„ section 11 - -	8

The foregoing figures are exclusive of the 39 Vestries and District Boards in the Metropolis by each of whom an analyst has been duly appointed.

Analyses.

The result of the analyses made in the course of the year is shown in the abstract printed at p. 440 of the Appendix. It will be seen that the total number of such analyses is 19,439, or about 1,600 more than in 1880. Unfortunately, however, there are still many populous towns, and yet more rural districts, where the Acts are a dead letter, and where the dairyman may safely water his milk, and the grocer add chicory to his coffee. Taking the population of England and Wales at twenty-six millions and a quarter, we find that one sample was analysed for every 1,350 persons. In London the proportion was nearly double this, and in six counties, namely, Bedford, Somerset, Surrey, Chester, Gloucester, and Stafford, the metropolitan average has been approached or exceeded. If every authority throughout the country would adopt our suggestion of a former year that at least one sample for each thousand of population should be submitted for analysis, the effect of the Acts would be fairly tested. At present their operation is very partial. Analysts have been appointed, as we have said, practically throughout England, but in many cases nothing is given them to do. Within the jurisdiction of the magistrates of the counties of Berks, Dorset, Hereford, Hertford, and Suffolk, not a single sample was procured for analysis. Cambridgeshire sent 10 samples, Cornwall 2, Northumberland 9, Shropshire 13, Westmoreland 6, and several of the Welsh counties an insignificant number. From no less than 69 boroughs, with an aggregate population of more than a million, the returns are absolutely *nil*, and in many others the number of samples analysed is disproportionately small. We regret to find that in some considerable boroughs, such as Ashton-under-Lyne, Blackburn, Coventry, Durham, Kidderminster, Middlesbrough, Northampton, Nottingham, Oxford, Plymouth, Preston and Rochdale, the Acts were entirely, or almost

entirely, ignored. The south-western counties appear to be particularly unfortunate in this respect, for the 18 boroughs of Dorset, Devon, and Cornwall only sent 70 samples in the whole, 60 of which were from the single city of Exeter. We have previously stated that it is essential that samples should be collected by the officers whom the authorities are empowered to appoint for that purpose under the Act of 1875, as private purchasers are not, to any great extent, found willing to undertake the work themselves; and our experience in this respect has received further confirmation in 1882; for though there has been an increase, to which we shall presently refer, in the private purchases for analysis, the whole number of such purchases is comparatively insignificant.

The following table shows the number of samples examined during the year, and the per-centage of cases in which adulteration was reported. It must be remembered, however, that this per-centage includes a very large number of cases in which the adulteration was so small that no proceedings were instituted, whilst in some instances the prosecution failed because it was shown that due notification of admixture had been given by the vendor. The reports which we receive, being copies of those made by the Public Analysts to the Authorities under whom they act, as a general rule merely specify the results of each analysis, without giving information as to any legal proceedings which may have followed, and with which of course the Analysts are not immediately concerned. The Court of Quarter Sessions for the County of Essex, however, requires the Inspectors to whom the institution of proceedings is committed to inform the Analyst as to their result in each instance where a sample has been found adulterated; and in this case, therefore, the Analyst's reports contain information which may serve as some index to the relation between the number of adulterated samples, and that of successful prosecutions. Of 461 samples, then, examined by the Public Analyst for Essex during the year, 98 were found adulterated, 60 convictions were obtained, and fines amounting in the aggregate to 127*l.* 10*s.*, with costs in each case, were inflicted. If the same proportion obtains elsewhere (as to which, however, we have no evidence) it may be assumed that proceedings were successfully taken in respect of rather less than two-thirds of the samples classed as adulterated in the following table:—

—	Examined.	Adulterated.	*1881.* *Percentage of adulteration.*	1882. Percentage of adulteration.
Milk - - -	7,341	1,440	*19·5*	19·6
Bread - - -	1,204	77	*4·7*	6·4
Flour - - -	523	3	—	0·6
Butter - - -	1,238	173	*13·9*	13·9
Coffee - - -	1,487	278	*18·3*	18·7
Sugar - - -	296	—	*0·3*	—
Mustard - - -	968	173	*14·2*	17·9
Pickles(including tinned Vegetables).	38	1	*5·8*	2·6
Jam - - -	158	13	*6·5*	8·2
Confectionery - -	182	—	*0·9*	—
Wine - - -	35	1	*5·2*	2·8
Beer - - -	470	26	*2·4*	5·5
Gin - - -	808	191	*25·9*	23·6
Spirits other than Gin	1,359	357	*28·4*	26·3
Drugs - - -	387	56	*15·0*	14·5
Other Articles - -	2,945	142	*3·5*	4·8
Totals - -	19,439	2,931	*14·67*	15·07

It will be seen from this table that the proportion of adulterated samples is rather less than 15·1 per cent. of those examined. This proportion shows a fractional excess over that for the previous year, but compares favourably with the average per-centage in the five years 1877–1881, during which period 83,442 samples were examined, and 13,528, or 16·2 per cent., were reported against. In the Metropolitan District, adulteration, so far as its prevalence can be estimated from the returns, appears to be somewhat on the increase. The per-centage of adulterated samples in the London returns for 1881 was 12·4, in those for 1882 it was 14·6.

There are a good many considerations, however, which have to be weighed in determining how far differences in the per-centage of adulterated samples in various districts fairly represent the relative amounts of adulteration really existing. Those differences are certainly remarkable. The average per-centage throughout the country is, as we have said, 15·1. In the county of Derby, however, out of 169 samples 52, or nearly 31 per cent., were pronounced to be not genuine, and in the extra-municipal districts of Warwickshire, out of 324 samples, 77, or about 24 per cent., were reported against. On the other hand in Gloucestershire, of 552 samples only 7, or

1·4 per cent., were returned as adulterated; in Leicester only a single sample was condemned out of 119; and in the district of Mile End Old Town a favourable report was sent as to every one of the 32 samples examined. No doubt the practice of analysts varies somewhat in the interpretation of their results. One analyst returns a sample as "adulterated, but to so small an extent that legal proceedings are not advisable": another, when dealing with a sample of the same character—as, for instance, one of beer in which it is doubtful whether an inconsiderable excess of salt is due to chlorides in the water used for brewing or has been added afterwards—reports it simply as genuine. But no doubt the differences depend much less on the particular analyst than on the mode of obtaining samples. In some districts care is taken, by the employment of purchasers whom tradesmen would not be likely to suspect, that the goods obtained are the same as those supplied to the general public. In others scarcely any attempt is made to conceal the official character of the buyers, or the purpose for which they are buying; and in one county in which the duty is entrusted to the police it was even the practice, a year or two ago, for the purchases to be effected by constables in uniform. In some boroughs, too, the person employed is the Inspector of Weights and Measures, who remains in office year after year, is a well known public character, and is of course served with articles of exceptional goodness, and even, as in cases which have come before us, with milk to which some cream has been added by the dairyman to make sure of being on the safe side. We have no information as to what system for obtaining samples is in force in the Gloucestershire, Leicester, and Mile End cases to which we have already referred. If the amount of adulteration discovered fairly represents the amount which exists, the tradesmen of these favoured localities must have attained to a height of honesty which is uncommon elsewhere.

Milk is, as usual, the chief subject of analysis. Out of less than 20,000 samples examined, more than 7,000 were of milk, and not far short of one fifth were condemned. The exact per-centage of adulterated milk in the whole of England and Wales in 1882 was 19·6; in 1877 it was 24·1. In the entire Metropolis the per-centage of milk adulteration was 24·5, and in a good many indi- Milk.

vidual districts this per-centage, formidably large as it is, was far surpassed; for instance, in the City of London and in Bethnal Green more than half, and in Camberwell and St. Pancras more than one third, of the samples examined were condemned by the analyst. On the other hand, in Plumstead, Westminster, Mile End, and some other districts, either no adulterated samples at all were detected, or so small a proportion as to suggest a doubt whether the milk submitted for analysis can be regarded as fairly representative of that ordinarily sold in those places.

Of the eight most populous provincial towns enumerated in the order of their apparent culpability in this matter, we find that Birmingham has 36 adulterated samples of milk out of 102 analysed; Manchester 104 out of 420; Sheffield 8 out of 33; Liverpool 61 out of 292; Bristol 21 out of 101; Salford 79 out of 384; Bradford 9 out of 64; and Leeds 3 out of 25.

Birmingham, therefore, still retains the distinction which it has for some years possessed of having a larger proportion of its milk reported as adulterated than any other great town in the kingdom; though it is fair to say that as regards other articles of food the analyses do not give it any such bad pre-eminence.

We have in previous reports entered so fully into the question of milk analysis and the difficulty, in the present state of science, of distinguishing between milk naturally poor and milk to which water has been added, that we need now only observe that the experience of the past year has further illustrated this difficulty; and it seems clear, from numerous analyses of admittedly unsophisticated samples from healthy cows, that a too rigid adherence to the minimum standard nominally adopted by certain analysts may now and then result in the condemnation of absolutely genuine milk. On this point we have received a communication from the Principal Chemical Officer of the Commissioners of Inland Revenue, an extract from which is printed in the Appendix, p. 444.

We may add that it should be remembered in this connexion that the Sale of Food and Drugs Acts are not designed to prevent the sale of poor articles, but that of adulterated articles.

Water continues to be almost the only adulterant used, but in Liverpool starch or flour paste was found

in one sample of milk and in one of cream; and in Reading some milk which was of moderately good quality, so far as its component parts went, was reported as coloured with turmeric.

There have been a few convictions under the useful provision of the Act of 1879 which allows the taking of samples from milk-cans at railway stations before delivery to the consumer. In one district dairymen had frequently pleaded, when prosecuted for adulteration, that they sold the milk as they had received it from the country, and the authority took some pains to test the truth of these statements by sampling the milk *in transitu* between the wholesale dealer and the retailer. The result was that the former, who was described as a man in a good position, was fined 20*l.* and costs.

No doubt a fine of this amount is likely to act as a deterrent, but the profits resulting from milk adulteration are so enormous, that the smallness of the penalties often imposed, even after repeated convictions, is a material hindrance to the effective operation of the Acts. In reference to this matter, the analyst of the City of London states that it has not been deemed expedient to institute prosecutions during the year, on account of the difficulty of obtaining convictions and of the great leniency shown by magistrates in awarding punishments to proved offenders. The analysts for Woolwich and for Southampton also complain as to the inadequacy of the fines inflicted, and there have been other representations to the same effect. The question is, of course, one for the magistrates alone, and they appear, as a rule, to regard 2*l.* as the maximum fine to be inflicted, except in particularly gross cases. In New York City a very different course is adopted. The "Herald" records the conviction on a single day of no less than 34 milkmen who, in the reporter's phrase, had been discovered in their "aqueous practices," and who were mulcted in penalties, averaging about 30 dollars each, but amounting in some individual cases to 150 dollars, with the addition, in the instance of a milkman who had not only watered but also salted his milk, of a month's imprisonment in the Penitentiary. If the average of fines in England were anything like this, adulteration would be discouraged more effectually than is the case at present.

Bread. Of bread and flour, 1,727 samples were examined, of which 80, or less than five per cent., were reported against. Alum is, as usual, the chief adulterant, and there have been some disputes as to whether the occurrence of alumina in particular cases was due to additions made in order to improve the appearance of the bread, or to the fact that some descriptions of flour, especially that made from Egyptian wheat, contain appreciable quantities of clay.

Butter. The sale of butterine in place of butter, sometimes with notification to the purchaser, but often without, continues to be pretty general. Another ingenious plan, which perhaps cannot be stigmatised as actual fraud, though coming perilously near it, is the manufacture of butter containing an inordinate amount of water. Of course, butter cannot be made without having some water in it, and if it can be induced to absorb an exceptionally large quantity, the operation is very profitable.

Coffee. Coffee blended with chicory continues to be extensively sold without notification of the admixture, and the practice seems to be too firmly rooted to be eradicated by the operation of Acts of Parliament. There have been some rather strange failures of proceedings; in one case, because the price at which the mixture was sold was too low, in the magistrate's opinion, for the purchaser to suppose that he could be buying pure coffee; in another, because the adjective "French," was prefixed to "coffee" on the labels; in another, because, although two different analysts detected chicory, they were not agreed as to the proportion added,—as to which last case it may be observed that, unless extraordinary care be taken, it is extremely hard so to blend chicory with coffee that the mixture shall be in the same proportion throughout the bulk operated on. These decisions do not seem to have been reviewed by a Superior Court. Only in one case was the adulterant other than chicory; in that instance dandelion root was employed.

Sugar. Out of nearly 300 samples of sugar examined, not one was reported against. This is probably because, with the abolition of duty and reduction of price, sugar is no longer worth adulterating.

Mustard.

We are not sorry to observe that, in one or two cases in which proceedings were taken in respect of the sale of ordinary table mustard, the magistrates held that it was not essential that the article should consist exclusively of mustard seed, but that the customary process of manufacture, which blends with that seed a small amount of wheat flour, is permissible without exposing the vendor to penalty. As a matter of fact, such a mixture has been sold for many years under the name of mustard, and the wheat flour is added, not for cheapness, but because pure mustard flour has an unpleasantly bitter taste, and, moreover, is very liable to ferment and decompose if exposed to heat. Most people demanding mustard for table purposes would be disappointed unless prepared mustard were supplied to them; and it seems scarcely fair that the sale of this particular article of manufacture should expose its vendor to penalty for adulteration. The question is mainly one of custom and of nomenclature.

Jam.

The jams of the best known manufacturers do not seem in any case to have been found adulterated, but in some others there have been rather singular metamorphoses,—apples, foreign seeds, and currants having been manipulated, coloured with fuchsine, and sold as raspberry jam.

Confectionery.

None of the samples of confectionery were reported against, and we trust that the old practice of adorning sweetmeats with poisonous pigments, a practice which lasted long after its extreme danger had been pointed out by Dr. Hassall and others, has at last fallen into disrepute and disuse.

Wine.

Of wine very few samples were examined, and only one was found adulterated.

Beer.

Of the 470 samples of beer examined, about five per cent. were condemned, mainly on account of excess of salt. We should be glad to believe that this per-centage represents the real proportion of the cases in which beer has been in any way tampered with after it has left the hands of the brewer. There is, however, one difficulty which used not to exist about the analysis of beer. Formerly, owing to the operation of Excise Laws, beer could only consist of malt and hops, then of malt, hops, and sugar. Now, its ingredients are not thus limited,

and there seems to be no authoritative definition of "beer."

Spirits.

As to spirits, experience proves that they are hardly ever adulterated with anything but water, but it seems that even the extremely low standards fixed by the Act of 1879 do not allow the retailers to dilute sufficiently for their purpose, and about a quarter of the samples are reported against.

Drugs.

With regard to drugs, we must again express our regret that so few are examined. It is certainly not desirable that they should receive much less attention than spirits. More than two thousand samples of spirits were analysed, whilst less than one-fifth of that number of samples of drugs were examined, although the difference between a genuine and an adulterated medicine may be a matter of life or death for the patient. We are glad, however, to observe that the diminution in the adulteration of drugs, so far as can be judged from the small number analysed, still continues; and it is noticeable that in some cases the drugs condemned were bought not from chemists but from grocers. As to this it may be observed, as regards one article which often figures in these returns, that the grocer who retails paregoric is in a difficulty. If he sells the genuine article, which contains opium, he is liable to penalty under the Pharmacy Act, 1868. If he sells the spurious compound, which contains none, he comes within the provision of the Sale of Food and Drugs Acts. And yet paregoric is very frequently sold by grocers.

Samples from private purchasers.

Of the 19,439 samples analysed during the year, all but 429 were obtained by officers of Local Authorities under the 13th section of the Act of 1875. Of the samples purchased privately about one-third were found adulterated, of those purchased officially about one-seventh. The difference is no doubt mainly due to the fact that a private purchaser is not likely to incur the trouble and expense of analysis except on very strong suspicion of adulteration; and besides this, there are, as we have already said, reasons for believing that the official inspectors are often recognised, and are supplied with better articles than those sold to the general public.

It should be noticed that of the 429 private samples, no less than 242 came from the three boroughs of Salford, Bristol, and Brighton, in the two former of which the fee to private individuals is only 2*s.* 6*d.* for each analysis.

Judicial decision under Sale of Food and Drugs Acts.

Only one decision of the High Court of Justice seems to have been given during the year with reference to the Sale of Food and Drugs Acts. In the case of Parsons *v.* the Birmingham Dairy Company (L.R. 9, Q.B.D. 172) it was held that the provisions of section 14 of the Act of 1875 apply to the case of a private purchaser under section 12, as well as to that of a public officer under section 13; and, therefore, where a private purchaser does not duly notify to the seller of an adulterated article his intention to have such article analysed by a public analyst, he is debarred from taking proceedings under section 6.

Analyses of tea by Customs.

We have been furnished by the Commissioners of Customs with the report (printed at p. 442 of the Appendix) of their analyst on the examination of teas in bond under the 30th section of the Act of 1875. It shows a substantial diminution in the importation of spurious tea.

Measures against adulteration in Paris.

We have received through the Foreign Office an interesting report, issued from the Prefecture of Police, of the proceedings of the Municipal Laboratory of Paris during the year 1881 in relation to the adulteration of food and drink in that city. We find that, although the operations of the laboratory only began towards the end of February, no less than 6,517 samples were analysed during the year, a number which is about twice as great, in proportion to the population, as that of the analyses in London. It is not easy to compare the relative amounts of adulteration in the two cities, for under the French system the samples are not classified merely as genuine or adulterated, but are reported as "good," "tolerable," "bad, but not injurious," or "bad and injurious," as the case may be. It seems, however, that half of the entire number of samples analysed are stigmatised as "bad," and that the same proportion obtains as regards the samples of milk; and we may infer from this that Paris is at present worse off than London in the matter of adul-

teration. The organisation of the Paris system differs materially from our own. There is a single official laboratory with a staff of six analysts and assistants, costing in all 76,400 fr. annually. Attached to this staff there are 32 inspectors, whose duty it is to visit markets and shops, and to procure samples for analysis. The public are entitled, on taking any article to the laboratory and giving particulars of its origin, to be furnished gratuitously with a qualitative analysis specifying roughly its character. Quantitative analyses are also furnished on demand, but for each of these a charge is made varying, according to the nature of the article, from 5 fr. to 20 fr. If any sample brought by the public is found to be adulterated, an inspector forthwith proceeds to the shop from which it is stated to have been procured, and obtains another sample, upon the analysis of which, if adulteration is detected, legal proceedings are based. This system seems to have certain advantages over our own, especially so far as gratuitous analyses for the public are concerned, though it might be possible that the increasing demand for such analyses would be such as to overtax the resources of the establishment. It does not, however, provide the safeguards of our English system against the results of an erroneous analysis, though it may doubtless be assumed that precautions are taken to minimise the risk of error.

Vaccination.

The final returns of the Vaccination Officers of the several Unions in England and Wales, relating to children whose births were registered in the year 1880, were received by us early in 1882, and are tabulated in detail in the Appendix, page 309. The following Table gives a summary of these returns for each of the 11 districts into which the country is divided for registration purposes.

VACCINATION RETURNS, 1880.

——	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox, and therefore Unvaccinated.	Dead. Unvaccinated.	Vaccination postponed by Medical Certificate.	Remaining.	Percentage of Children not finally accounted for, including cases postponed.	*Similar percentage in return for 1879.*
ENGLAND & WALES	881,652	750,203	859	46	87,361	5,930	37,253	4·9	5·0
DIVISIONS.									
LONDON	133,306	111,650	263	35	12,039	579	8,740	7·0	7·8
SOUTH-EASTERN	77,081	67,705	86	3	6,488	660	2,139	3·6	3·9
SOUTH MIDLAND	50,881	43,856	59	—	5,066	292	1,608	3·7	4·0
EASTERN	43,787	37,909	32	3	4,195	279	1,369	3·8	3·4
SOUTH-WESTERN	55,842	48,985	26	—	5,155	465	1,211	3·0	3·4
WEST MIDLAND	104,226	89,952	83	—	10,312	567	3,312	3·7	4·4
NORTH MIDLAND	57,223	46,632	50	—	6,667	370	3,504	6·8	6·9
NORTH-WESTERN	148,200	125,637	105	4	15,442	958	6,054	4·7	4·3
YORK	100,335	82,584	99	—	11,206	763	5,683	6·4	6·4
NORTHERN	58,909	49,970	40	1	6,144	542	2,212	4·7	5·0
WELSH	51,862	45,323	16	—	4,647	455	1,421	3·6	3·5

From this Table it will be seen that of 881,652 children whose births were returned by the Vaccination Officers of England and Wales as having been registered in 1880, rather over 85 per cent. are recorded as having been successfully vaccinated, nearly 10 per cent. as having died unvaccinated, and a minute fraction (·005 per cent.) as remaining unvaccinated on account of their having had small-pox. A small number (rather less than 0·1 per cent.) were certified as "insusceptible of vaccination" in consequence of the operation having been three times performed without success; and in these cases the parents are exempted from liability to penalty under the Vaccination Acts, although the unsuccessful operation has afforded no protection against small-pox. It is significant that cases of so-called "insusceptibility" are almost unknown to public vaccinators; indeed one of the vaccinators acting for our Vaccine Establishment has performed many thousands of vaccinations without having ever met with an instance of the kind. The returns further record cases amounting

to about 0·7 per cent. of the whole, in which vaccination was postponed by medical certificate on account of the state of health of the children. Some of such children are no doubt eventually vaccinated, but it may be assumed that many of them escape vaccination altogether. The proportion of cases not coming under the above heads somewhat exceeds 4 per cent. of the whole, the majority being children whom, on account of the removal of the parents from the addresses given on the registration of the births, the Vaccination Officers professed themselves unable to trace.

It thus appears that of the entire number of children born, rather less than 5 per cent. remain unaccounted for in the returns as regards vaccination. This proportion shows a fractional improvement on that of the previous year.

London vaccination returns.

The Returns for the Metropolis for 1880, though less unsatisfactory than those for 1879, still compare unfavourably with the Returns for the rest of the country. The default is in great part due to defective administration of the Vaccination Acts in Islington, Shoreditch, and Lambeth. These districts, so far as we are aware, present no greater difficulties as regards the enforcement of vaccination than many others from which we receive excellent returns.

We have referred at length, in previous reports, to the main reasons why the Vaccination Acts are less thoroughly carried out in London than in the country, and we need only now observe that the migratory habits of the poorer Metropolitan population make it in many cases exceedingly difficult for the Vaccination Officer to trace parents who have left the address at which the birth of their child was registered. The experience, however, of such districts as Whitechapel and Kensington shows that this difficulty may to a great extent be surmounted by the prompt action of an energetic officer, working under adequate supervision, and we trust that the representations which we have made to several Boards of Guardians on this subject will not be ineffectual. No doubt an epidemic of small-pox is one of the most powerful promoters of vaccination, and in the year 1880, to which the returns now under consideration relate, this stimulus was absent. In 1881, however, there was an epidemic which caused between two and three thousand deaths,

and the effect is evident in the returns received while this report is going through the press, and which show that, of the children whose births were registered in that year, a much larger proportion was vaccinated than in any year since the passing of the Vaccination Act, 1871.

Country vaccination returns.

In the provinces, the proportion of children unaccounted for as regards vaccination is the same as in the returns on which we commented last year, namely, $4\frac{1}{2}$ per cent. In the 12 largest towns the average proportion is 5 per cent., but in Leeds only a little over one per cent., and in Birmingham and Portsmouth only $2\frac{1}{2}$ per cent. are unaccounted for, these excellent results being doubtless mainly due to the efficiency with which the Vaccination Officers in these Unions do their work under the supervision of Committees of the Guardians. On the other hand, there are about a dozen provincial Unions where the per-centage of default exceeds 10 per cent., the most prominent being Keighley (63 per cent.), Leicester (21 per cent.), Dewsbury (17 per cent.), and Banbury ($15\frac{1}{2}$ per cent.).

Vaccination inspection and awards.

In our duty of supervising the performance of public vaccination, we in 1882 directed the inspection by our Medical Inspectors of 284 Unions, comprising 1,350 vaccination districts. To the Public Vaccinators in 751 of these districts special awards were made by us under Section 5 of the Vaccination Act, 1867, in recognition of the excellence of the work done and the careful observance of the instructions and regulations which govern its performance. The entire sum awarded in respect of the inspections of 1882 was 14,264*l.* 16*s.* 8*d.* Details of the apportionment of this amount are given in the Appendix, p. 325.

Inquiries as to alleged injury and deaths through vaccination.

During the year we had occasion to direct inquiry into the circumstances of the death of certain children who were vaccinated at the Public Vaccination Station in Norwich by Dr. Guy, a Public Vaccinator for the Norwich Union. The report of our Inspectors, together with a Memorandum by our Medical Officer on the subject, have already been laid before Parliament.

A case of erysipelas after vaccination in the Derby Union gave rise to inquiry through one of our Medical

Inspectors; and the Public Vaccinator's disobedience of the official Instructions was found to be such that we had to advise the Guardians to terminate his contract.

Upon receiving, in June 1882, representations from the Coroner of Wolverhampton, we instructed our Inspector, Dr. Ballard, to attend an inquest upon the body of a child who was reported, upon Medical Certificate, to have died from "Vaccination" and "Blood-poisoning." The evidence given at the inquest conclusively showed that the child had died from inherited syphilis; and the jury returned a verdict that the death was from "natural causes, and not from the effects of vaccination."

Lymph supply.

We have continued our administration of the system which, under the name of the National Vaccine Establishment (see Appendix, p. 330), is devoted to providing vaccine lymph for the purpose of enabling public vaccinators and other medical practitioners from time to time to start local series of vaccinations. The usual inspections have been made of the lymph-supplying stations, and all supplies have been microscopically examined under our direction before issue. The number of applications for vaccine lymph received and dealt with during the year was 10,331. The supplies of animal lymph issued during the year were 2,872 charged ivory points, and 270 charged capillary tubes.

Animal vaccination.

The station to which we referred in our last report as having been established by us at Lamb's Conduit Street for the performance of calf-vaccination has been of much service in supplementing the resources of our Vaccine Establishment, and 419 persons have been vaccinated there in the course of the year.

Vaccination by public vaccinators.

In the Appendix (p. 308), will be found the usual tables relating to the number of persons successfully vaccinated by public vaccinators during a series of years commencing with 1852.

Medical inspections.

During the year the experience of our Medical Department has in numerous instances been utilised by Sanitary Authorities desirous of devising the best practicable means of providing their Districts, either separately or in combination, with hospital accommodation for cases

of infectious disease; and local inspections have been made by our medical staff in connexion with proposals, for the establishment of hospitals, which have been made to us by the Sanitary Authorities of Ashton-in-Makerfield, Bromley, Coventry, Ealing, Erith, Guildford, Hyde, Hebburn, Jarrow, Llandudno, Rhyl, Maidstone, Over Darwen, Wells, and the Port of London.

A Report by our Inspector, Dr. R. Thorne Thorne, on the use and influence of hospitals for infectious diseases, was issued during the year as a supplement to our Tenth Annual Report, and contains information which we trust will be of material service to Sanitary Authorities contemplating the provision of such hospitals.

Proposals for byelaws were the subject of many conferences at our Office with particular Local Authorities, and, in the case of byelaws proposed by the Sanitary Authorities of Easington, Goole, and Toxteth Park, investigations on the spot were found desirable in order to ascertain the special conditions with regard to which certain rather exceptional clauses were proposed for adoption.

The site proposed for a Cemetery at North Bierley also reported on by an Inspector.

The local inquiries made by our medical staff during 1882, with reference to special outbreaks of disease, to the repeated incidence of infectious disease in particular neighbourhoods, or to the general sanitary administration of Local Authorities, numbered 36, and concerned, to a greater or less degree, the districts of 62 Sanitary Authorities.

Outbreaks of enteric fever were investigated at Norwood (Uxbridge Rural Sanitary District), Bangor and neighbourhood, Galgate (in Lancaster Rural Sanitary District), Sherborne, Clapham, Maryport, Ulverston, St. Helen's, Shoreham, Southborough, and Weston-super-Mare; outbreaks of diphtheria at King's Lynn, Sale, Sutton-in-Ashfield, Folkestone, Holbeach, Tempsford (Biggleswade Rural Sanitary District), Dartford, Great Coggeshall, and Taunton; and prevalence of scarlatina in St. Pancras and West London, Hull, Barrow-on-Soar, and Potton (Biggleswade Rural Sanitary District); whilst inquiries as to general sanitary conditions, defects in sanitary administration, or in connexion with special complaints were made at Andover, Ashton-under-Lyne, Plymouth, Barrow-on-Soar, Hindley, Helston,

Falmouth, Redruth, Kingsbridge, Plympton St. Mary, Millbrook, Torpoint, Brierley Hill, Ampthill, and Rochdale.

In many of the inquiries as to enteric fever it was found possible to establish with more or less certainty the connexion between the outbreak and a specifically polluted water supply. This was especially the case at Norwood (Uxbridge), Bangor, Galgate, and Sherborne.

Mr. W. H. Power, in investigating the outbreak of enteric fever at Norwood, found that the families attacked had obtained their water from two pumps which it was locally asserted drew their supply from two distinct wells. On the ground being opened up, however, it was found that the water supplied by both pumps was drawn from the same well, and that this well was situated within a short distance of a newly dug hole into which had recently been thrown the contents of cesspools that had had opportunity of receiving specific infection of fever. The circumstances of the outbreak went to show that soakage of infective material from the hole in question into the well had taken place, and that in this way the infection had been distributed.

An epidemic of enteric fever, more widely extended and much more disastrous than that at Norwood, broke out in the neighbourhood of Bangor in July. More than 550 cases of the disease, of which many proved fatal, occurred during the three summer months among a total population of less than 20,000. This outbreak was, at an early stage of the epidemic, ascribed by the local Health Officer to specific pollution of the water supply, and this opinion, especially as regards the earlier cases, was confirmed by our Inspector, Dr. Barry, after comprehensive local investigation.

In most of the cases in which the prevalence of this disease was found to be associated with contamination of wells or other sources of water supply, or with other remediable defects of sanitary administration, the Local Authorities have undertaken the improvement of their districts, but it is to be regretted that unhealthy conditions recognizable in common experience as provocative of disease should so frequently be allowed to remain in existence until attention is called to them by an outbreak of disease.

A considerable prevalence of scarlatina in the West of London in the early part of the year, among

persons who had obtained their milk supply from a particular source, was closely studied at the time by our Inspector, Mr. Power, and gave rise to some interesting pathological problems which are now being more particularly investigated by Dr. Klein by the aid of actual experiment.

Our Inspector, Dr. F. H. Blaxall, has during the year been engaged, in conjunction with an officer of the Board of Trade, in an inquiry as to the sanitary arrangements for emigrants arriving at and sailing from the various ports of the United Kingdom. Dr. Blaxall's report, which deals with a very important part of port sanitary administration, will form an Appendix to the Report of our Medical Officer for 1882.

School-closing for infectious disease.

In the inquiries made by Dr. Parsons as to a prevalence of scarlatina at Potton, and outbreaks of diphtheria at Tempsford, at Sutton-in-Ashfield, and at Gedney Drove End (in the Holbeach Rural Sanitary District), and also in Dr. Airy's and Mr. Power's investigations of the circumstances attending outbreaks of diphtheria at Great Coggeshall, and at Pirbright respectively, the spread of this disease was found to be associated with school attendance.

Much previous experience of the same kind and many representations which had been made to us of the necessity for placing some check on this means of disseminating infection induced us to think it desirable to communicate with the Education Department on the subject when the new Revised Code was in preparation, and a clause was inserted, at our instance, obliging the managers of any public elementary school to comply with any notice of the Sanitary Authority of the district, requiring them for a specified time either to close the school or to exclude any scholars from attendance. We trust that this provision will give Authorities a much needed means by which the spread of education may be prevented from involving the spread of infection. It must, however, be discreetly used, and Medical Officers of Health should beware of advising the closing of schools without sufficient reason. The prohibition of the attendance of children from particular houses or localities that are known to be infected will often be found sufficient to meet the object in view.

Midwives and puerperal fever.

On several occasions our attention has been directed to the occurrence of puerperal fever after labours at which midwives have been in attendance. It would appear that these women are frequently ignorant of the danger to which they expose their patients, if, in addition to their calling as midwives, they undertake the nursing of infected persons, or the laying out of the bodies of the dead. We are of opinion that Sanitary Authorities may usefully give warning on this subject to the several midwives practising in their districts; and that it behoves those Authorities to endeavour, by insisting on necessary precautions being taken, to prevent the occurrence in parturient women of a malady so very serious as puerperal fever.

Annual Reports of Medical Officers of Health.

The following Table shows the number of Annual Reports in respect of the year 1880 which have been made by Medical Officers of Health to Sanitary Authorities, and copies of which have been forwarded to us.

Annual Reports of Medical Officers of Health whose Appointments are subject to the Board's General Orders.

—	Rural Sanitary Authorities.			Urban Sanitary Authorities.		
	Number of Authorities.	Number of Medical Officers of Health.	Number of Annual Reports received.	Number of Authorities.	Number of Medical Officers of Health.	Number of Annual Reports received.
Medical Officers of Health, a portion of whose salary is repaid out of moneys voted by Parliament, and acting for the District of a single Sanitary Authority.	288	288	282	369	369	364
Ditto, and acting for divisions of Districts of a Sanitary Authority.	69	207	189	—	—	—
Ditto, and acting for the District of two or more Sanitary Authorities.	137	39	128	163	40	150
Medical Officers of Health, no portion of whose salary is repaid out of moneys voted by Parliament, and acting for the District of a single Sanitary Authority.	31	31	23	219	219	187
Ditto, and acting for divisions of Districts of a Sanitary Authority.	20	72	70	—	—	—
Totals	545	637	692	751	658	701

All these Reports have been carefully examined, analysed, and compared with those of previous years,

and in many instances have furnished the ground for correspondence with Local Authorities as to the sanitary requirements of their districts. Besides these Reports we have received and considered those which have been sent to us by Authorities whose Medical Officers of Health are not subject to the provisions of our Orders, but who have nevertheless desired to keep us acquainted with their sanitary doings during the year.

Special Sanitary provisions in Local Acts.

We have referred in previous Reports to Local Acts by which exceptional sanitary powers have been given to certain Urban Authorities in relation to infectious disease, in some cases merely extending to its notification, in others authorising special methods of dealing with outbreaks and with conditions injurious to health. An unusually large number of provisions of this kind having been inserted in several local Bills introduced into Parliament in the past year, the attention of the House of Commons was called to the policy of conferring, in particular instances, powers going far beyond any given by the general law in relation to infectious disease; and the Bills in question were referred to the Select Committee on Police and Sanitary Regulations, to which reference has already been made in this Report.

After taking much evidence on the subject, the Committee reported generally in favour of the notification system, expressing an opinion that the time has come when provisions of law on this subject may be sanctioned at least in the more important Urban Sanitary Districts. In certain other points the Committee were of opinion that the provisions of the existing sanitary law might fairly be supplemented in large towns. They appended to their Report clauses giving extended powers in relation to the disinfection of premises, and imposing penalties on persons ceasing to occupy infected houses without previous disinfection, or making false answers to intending tenants as to the existence of infectious disease. Other suggested provisions would require the speedy burial of persons who have died from such disease, prohibit the use of cabs for the conveyance of corpses of such persons without notice to the owner, and, in case of the use of such vehicles for the purpose, require their disinfection. Others would authorise the Authority to provide accommodation for persons whose house is being disinfected and to provide nurses for infectious cases.

All these clauses are such as would deserve consideration in the event of any comprehensive amendment of the general sanitary law. On the other hand, the Committee reported against various provisions by which it was sought to obtain powers to impose certain irksome restrictions on the victims of infectious disease; to close schools and shops; to quarantine families in their own homes; to prohibit healthy people from going to work from infected houses, and so on. It is true that provisions of this kind have been inserted in certain local Bills previously passed, although we had taken occasion to call attention to the objections to which they were open; but we are glad that the action of the Committee, and the recent amendment of the Standing Orders as to such legislation are likely to have the effect of causing such proposals to be looked upon by Parliament less favourably in future. Unless a town has peculiar conditions that cannot be adequately dealt with under the general law, it appears undesirable that in case of the outbreak of infectious disease its inhabitants should be subjected to exceptional restrictions which, after all, are in some instances merely sorry makeshifts designed to save the necessity of providing adequate hospital accommodation.

Compulsory notification of infectious disease.

The system of compulsory notification of infectious disease, to which we have referred in previous reports, is at present in force in thirty towns with an aggregate population of about two millions and a quarter. Five of these, namely, Accrington, Chadderton, Halifax, Macclesfield, and Newcastle, adopted it in their Local Acts of 1882, and in two others, viz., Salford and Bury, we authorised it by Provisional Order, approved by Parliament in the same Session. From the other twenty-three we have obtained Reports on its working, and those Reports, which were published in the form of a Parliamentary Paper, seem to show that the Authorities and their Medical Officers of Health are practically unanimous in a belief as to its great utility in curbing the spread of infection.

Foreign epidemics and quarantine.

We are glad to be able to state that no foreign epidemics, either of plague or of cholera, specially occupied our attention during the year. The question, however, of quarantine measures taken abroad, especially on

the route to India through Egypt, has demanded consideration.

A separate report by our Medical Officer for the year 1882 will be published as a supplement to the present volume, and will contain detailed information with regard to some of the sanitary matters to which, in view of that publication, we have here only briefly referred, as well as to certain investigations on questions connected with particular diseases which have specially engaged the attention of our medical staff during the year.

Medical Officer's Report to be published separately.

During the year ended 31st December, 1882, we revised and confirmed many series of Byelaws made by Sanitary Authorities under the Public Health Act, 1875, and the statutory provisions incorporated therewith.

Byelaws under Public Health Act, 1875.

The number of series which we have confirmed and the various subjects to which they relate are shown in the following Table :—

PUBLIC HEALTH ACT, 1875.

BYELAWS CONFIRMED FOR SANITARY AUTHORITIES.

Number of Series confirmed.	General Subjects.	Particular Subjects.
31	Cleansing of footways and pavements Removal of house refuse Cleansing of earthclosets, privies, ashpits, and cesspools	Cleansing of footways and pavements adjoining any premises; Removal of house refuse from any premises; and Cleansing of earthclosets, privies, ashpits, and cesspools belonging to any premises. (38 & 39 Vict. c. 55. s. 44.)
43	Nuisances	Prevention of nuisances arising from snow, filth, dust, ashes, and rubbish, and prevention of the keeping of animals on any premises so as to be injurious to health. (38 & 39 Vict. c. 55. s. 44.)
37	Common lodging houses	Fixing and from time to time varying the number of lodgers who may be received into a common lodging-house; Separation of the sexes; Promoting cleanliness and ventilation; Taking precautions in the case of infectious disease; and Well ordering of such houses. (38 & 39 Vict. c. 55. s. 80.)
57	New streets and buildings	Level, width, and construction of new streets; Structure of walls, foundations, roofs, and chimneys of new buildings, for securing stability and the prevention of fires, and for purposes of health; Sufficiency of the space about buildings to secure a free circulation of air, and ventilation of buildings;

Number of Series confirmed.	General Subjects.	Particular Subjects.
		Drainage of buildings; Waterclosets, earth-closets, privies, ashpits, and cesspools in connexion with buildings; Closing of buildings or parts of buildings unfit for human habitation, and prohibition of their use for such habitation; Giving of notices. Deposit of plans and sections by persons intending to lay out streets or to construct buildings; Inspection by the Sanitary authority; and power of such authority to remove, alter, or pull down any work begun or done in contravention of byelaws. (38 & 39 Vict. c. 55. s. 157.)
8	Markets - - -	Regulating the use of the market place, and the buildings, stalls, pens, and standings therein, and preventing nuisances or obstructions therein, or in the immediate approaches thereto; Fixing the days and the hours during each day on which the market shall be held; Regulating the carriers resorting to the market, and fixing the rates for carrying articles carried therefrom within the limits of the district. (10 Vict. c. 14. s. 42; 38 & 39 Vict. c. 55. s. 167.)
42	Slaughter-houses - -	Licensing, registering, and inspection of slaughter-houses; Preventing cruelty therein; Keeping the same in a cleanly and proper state; Removing filth, at least once in every twenty-four hours; and Requiring slaughter-houses to be provided with a sufficient supply of water. (10 & 11 Vict. c. 34. s. 128; 38 & 39 Vict. c. 55. s. 169.)
13	Hackney carriages - -	Regulating the conduct of the proprietors and drivers of hackney carriages plying within the district in their several employments, and determining whether such drivers shall wear any and what badges, and regulating the hours within which they may exercise their calling; Regulating the manner in which the number of each carriage, corresponding with the number of its license, shall be displayed; Regulating the number of persons to be carried by such hackney carriages, and what number of horses or other animals is to draw the same, and placing of check strings to the carriages, and holding of the same by the driver, and how such hackney carriages are to be furnished or provided; Fixing the stands of such hackneycarriages, and the distance to which they may be compelled to take passengers; Fixing the rates or fares, as well for time as distance, to be paid for such hackney carriages, and securing the due publication of such fares; Securing the safe custody and re-delivery of any property accidentally left in hackney carriages, and fixing the charges to be made in respect thereof. (10 & 11 Vict. c. 89. s. 68; 38 & 39 Vict. c. 55. s. 171.)
7	Public bathing - - -	Fixing the stands of bathing machines on the seashore or strand of any river used as a public bathing-place, and the limits within which persons of each sex shall be set down for bathing, and within which persons shall bathe; Preventing any indecent exposure of the persons of the bathers;

Number of Series confirmed.	General Subjects.	Particular Subjects.
		Regulating the manner in which the bathing machines shall be used, and the charges to be made for the same; Regulating the distance at which boats and vessels let to hire for the purpose of sailing or rowing for pleasure shall be kept from persons bathing within the prescribed limits. (10 & 11 Vict. c. 89. s. 69; 38 & 39 Vict. c. 55. s. 171.)
2	Public baths; duties of the officers and servants.	Securing that the baths shall be under the due management and control of the officers, servants, or others appointed or employed in that behalf by the Sanitary Authority; Securing adequate privacy to persons using the baths; Securing that men, and boys above eight years old shall bathe separately from women and girls, and children under eight years old; Preventing damage, disturbance, interruption, and indecent and offensive language and behaviour, and nuisances; Determining the duties of the officers and servants of the public baths: (*a*) The superintendent of the public baths: (*b*) The matron of the public baths: (*c*) The money-taker of the public baths: (*d*) A stoker of the public baths. (9 & 10 Vict. c. 74. s. 34 and Schedule A.)
5	Pleasure grounds - -	Regulation of public walk or pleasure ground, and removal therefrom of any person infringing a byelaw by any officer of the Urban Authority or constable. (38 & 39 Vict. c. 55. s. 164.)
5	Horses, ponies, mules, or asses standing for hire.	Regulating stands; Fixing rates of hire; Securing the good and orderly conduct of drivers and conductors while in charge. (38 & 39 Vict. c. 55. s. 172.)
4	Pleasure boats and vessels -	Regulating the numbering and naming of pleasure boats and vessels, the number of persons to be carried therein, and the mooring places for the same; Fixing rates of hire and the qualification of the boatmen or other persons in charge; and Securing their good and orderly conduct while in charge. (38 & 39 Vict. c. 55. s. 172.)
4	Houses let in lodgings - -	Fixing and from time to time varying the number of persons who may occupy a house or part of a house which is let in lodgings or occupied by members of more than one family; Separation of the sexes in a house so let or occupied; Registration of houses so let or occupied; Inspection of such houses; Enforcing drainage and the provision of privy accommodation for such houses, and promoting cleanliness and ventilation in such houses; Cleansing and lime-washing at stated times of the premises, and paving of the courts and courtyards thereof; Giving of notices and taking of precautions in case of any infectious disease. (38 & 39 Vict. c. 55. s. 90.)
7	Cemeteries - - -	Management of a cemetery, and charges for its use. (42 & 43 Vict. c. 31.)
2	Offensive trades -	Preventing or diminishing the noxious or injurious effects of certain offensive trades. (38 & 39 Vict. c. 55. s. 113.)

Byelaws under Local Acts.

Apart from the revision of Byelaws framed under the enactments above referred to, an important branch of our duties consists in the revision of Byelaws and Regulations made under Local Acts.

These Byelaws and Regulations, comprising as they do an extensive range of subjects, require to be carefully scrutinised with a view of keeping their provisions strictly within the limits of the statutory enactments authorizing them.

Under the Blackburn Improvement Act, 1879, we confirmed a series of Byelaws, submitted by the Town Council of the Borough of Blackburn, with respect to omnibuses, stage carriages, and other vehicles.

We confirmed a series of Byelaws submitted by the Town Council of the Borough of Birmingham for the regulation of Closed Burial Grounds under the Birmingham Closed Burial Grounds Act, 1878.

In pursuance of the provisions of the Preston Improvement Act, 1880, we confirmed a series of Byelaws submitted by the Town Council of the Borough of Preston as to omnibuses.

Under the Blackpool Improvement Act, 1879, we confirmed a series of Byelaws submitted by the Town Council of the Borough of Blackpool with regard to bathing machines, advertising vans, and touting.

We confirmed a series of Byelaws, submitted by the Town Council of the Borough of Warrington, under the Warrington Corporation Lighting and Improvement Act, 1879, relating to marine store dealers.

Under the provisions of the Birkenhead Corporation Act, 1881, we confirmed series of Byelaws submitted by the Town Council of the Borough of Birkenhead with regard to hackney carriages, carts, omnibuses, porters, and drovers, licensed slaughter-houses, Birkenhead Park, new streets and buildings, and " the waste, misuse, " undue consumption or contamination of water."

We confirmed Byelaws submitted by the Improvement Commissioners for the district of Llandudno with respect to omnibuses, waggonettes, stage coaches, and other carriages under the Act 44 & 45 Vict. c. clxii.

Under the Chorley Improvement Act, 1871, we approved a series of Byelaws for the regulation of slaughter-houses and markets.

We allowed a series of Byelaws "for regulating the use of the road, &c.," submitted by the Great Orme's Head Marine Drive Company, under the Act 36 & 37 Vict. c. cv.

In pursuance of the Aberdare Markets and Town Hall Act, 1880, we allowed Byelaws, submitted by the Aberdare Markets and Town Hall Company, with respect to markets and fairs and slaughter-houses.

We approved a series of Regulations under the provisions of the Dewsbury and Heckmondwike Waterworks Act, 1876, submitted by the Town Council of the Borough of Dewsbury for preventing waste or misuse of water.

We also approved a series of Regulations "for preventing waste, misuse, undue consumption or contamination of water," submitted by the Town Council of the Borough of Doncaster under the Doncaster Corporation Waterworks Act, 1873.

Under the Beverley Waterworks Act, 1881, we confirmed a series of Regulations for preventing waste, misuse, undue consumption or contamination of water, submitted by the Beverley Waterworks Company.

Under the Act 38 & 39 Vict. c. lxix., we approved the rates fixed by the Ossett-cum-Gawthorpe Local Board for the supply of water for domestic purposes.

A Table showing the several districts in which the Byelaws and Regulations that we have confirmed are in force will be found at p. 406 of the Appendix.

During the year we issued Parts XV. and XVI. of our Model Byelaws, under the Public Health Act, 1875, as the final series of the Code. These series, which, together with the Circulars issued to Sanitary Authorities, will be found in the Appendix at p. 13 *et seq.*, relate respectively to mortuaries and offensive trades.

The labour involved in the preparation of the Model Byelaws which have been issued by us, has been very considerable, but we have the satisfaction of knowing that they have been of great assistance to Sanitary Authorities desiring to frame byelaws under the Public Health Act.

Byelaws under the Highways and Locomo-

The subjoined table shows the number and subjects of the series of Byelaws which we have confirmed during

tives (Amendment) Act, 1878.

the year under the Highways and Locomotives (Amendment) Act, 1878.

HIGHWAYS AND LOCOMOTIVES (AMENDMENT) ACT, 1878.

Number of Series confirmed.	General Subjects.	Particular Subjects.
5	Waggons; Wains; Carts; Carriages; Gates; and Bicycles.	Prohibiting or regulating the use of any waggon, wain, cart, or carriage drawn by animal power, and having wheels of which the fellies or tires are not of such width in proportion to the weight carried by, or to the size of, or to the number of wheels of such waggon, wain, cart, or carriage as may be specified in the byelaws; Prohibiting or regulating the use of any waggon, wain, cart, or other carriage drawn by animal power not having the nails on its wheels countersunk in such manner as may be specified in the byelaws, or having on its wheels bars or other projections forbidden by the byelaws; Prohibiting or regulating the locking of the wheel of any waggon, wain, cart, or carriage drawn by animal power when descending a hill, unless there is placed at the bottom of such wheel during the whole time of its being locked a skidpan, slipper, or shoe in such manner as to prevent the road from being destroyed or injured by the locking of such wheel; Prohibiting or regulating the erection of gates across highways, and prohibiting gates opening outwards on highways; and Regulating the use of bicycles. (41 & 42 Vict. c. 77. s. 26.)
14	Locomotives	Hours during which locomotives are not to pass over turnpike roads or highways. Regulating the use of locomotives upon any highway. Preventing the use of locomotives upon certain bridges. Granting annual licenses to locomotives and the fee (not exceeding ten pounds) to be paid in respect of each license. (41 & 42 Vict. c. 77. ss. 31 & 32.)

The names of the several districts to which the Byelaws above described apply will be found set out in the Appendix at p. 409.

The Artizans' Dwellings Act, 1882.

The Artizans Dwellings Act, 1882, received the Royal Assent on the 18th of August last. Its provisions were founded on the Report of a Select Committee of the House of Commons, appointed to consider the working of the Artizans and Labourers Dwellings Improvement Acts, 1875 and 1879, with a view of considering how the expense of and the delay and difficulty in carrying out these Acts might be reduced, and also of inquiring into any causes which might have prevented the reconstruction of dwellings for the artizan class to the extent contemplated and authorised by these Acts.

Where an Improvement Scheme was made under the Act of 1875, it was necessary that it should provide for the accommodation of at least as many persons of the working class as might be displaced in the area to which the scheme related. The Act of 1875 also required that this accommodation should be afforded in suitable dwellings, which, unless there were special reasons to the contrary, were to be situate within the limits of the same area, or in its vicinity; but by section 4 of the Act of 1879, it was made sufficient if equally convenient accommodation was provided at some other place than within the area comprised in the scheme, or its immediate vicinity.

It was, however, found that, outside the Metropolis, it was only necessary in exceptional instances that arrangements should be made by an improvement scheme for the persons displaced, and accordingly under section 3 of the new Act it is no longer rendered obligatory on the Sanitary Authority to make such provision in the scheme unless it is required by us.

Section 4 of the Act contains provisions which it is considered will have the effect of diminishing the cost of carrying out improvement schemes, and by section 5 and the Schedule to the Act new regulations are introduced for the purpose of simplifying the procedure for determining the compensation to be paid for lands acquired under the Act of 1875. The most important of the alterations made are:—

1. The abolition of the provisional award of the Arbitrator; 2. The increase from 500*l.* to 1,000*l.* of the amount which the compensation must exceed to enable a person to appeal to a Jury against the amount awarded; and 3. The requirement that the costs, charges, and expenses payable by a Sanitary Authority shall be certified by us.

On the 10th November last we issued a Circular, of which a copy will be found in the Appendix, p. 53, to the Urban Sanitary Authorities of the districts to which the principal Act was applicable, drawing attention to the amendments above referred to.

By Part II. of the Act of 1882 the Artizans and Labourers Dwellings Act, 1868, and the Artizans and Labourers Act (1868) Amendment Act, 1879, were

amended, and by a Circular which we issued on the 11th November, and of which a copy appears in the Appendix, p. 55, we drew the attention of the Boards of Guardians of the Metropolis to the provisions of section 11 of the new Act, which afford means for bringing under the notice of the Metropolitan Board of Works cases in which it is desirable that they should enforce the execution of the Artizans Dwellings Acts. We at the same time expressed our hope that, in view of the importance of improving the dwellings of the poorer classes in the Metropolis, the Guardians will avail themselves of the power conferred upon them by the recent Statute whenever it can properly be exercised.

Alkali, &c. works regulation Act, 1881.

The Alkali, &c., Works Regulation Act, 1881, came into operation on the 1st of January 1882. It has brought under supervision a large number of works which were previously carried on without being subject to inspection by our inspectors. Before the Act came into force there were only about 150 works actually liable to inspection under the Alkali Acts, whereas the number of works entered upon our register at the close of the year 1882 was 976. The Regulations which were issued by us as to the registration of works which come within the provisions of the Act will be found in the Appendix, p. 3. A Table showing the various classes of the works which were registered during the year and the number belonging to each class is also given in the Appendix, p. 445. For the purpose of inspection it has been found expedient to divide the United Kingdom into eight separate districts, to each of which one or more inspectors are assigned, the whole being under the supervision of a Chief Inspector, Dr. R. Angus Smith, F.R.S. The expenses of this organization are partially covered by the amount of the stamp-duty payable on the certificates which the Act requires the owners of registered works to take out annually. This duty for Alkali Works is fixed at 5*l.*, and for other works at 3*l.* The Chief Inspector is required by the Act to furnish the Board with an annual report, to be laid before Parliament, of the proceedings of himself and of the other inspectors under the Act.

For the proceedings of the Chief Inspector and of the other inspectors under the Act, we would refer to the

Reports of those officers for the year 1882 which have been presented to Parliament.

By section 20 of the Act an owner of a work to which the Act applies is empowered, subject to our sanction, to make special rules "for the guidance of his workmen who "are employed in any process causing the evolution of "any noxious or offensive gas or whose duty it is to "attend to the apparatus used in the condensation of that "gas, or for preventing the discharge thereof into the "atmosphere or for rendering any such gas harmless "and inoffensive when discharged." In pursuance of this section we sanctioned rules submitted by owners of alkali works, and applicable to bleaching powder men, salt cake men, burner men, and chlorate men.

Metropolis Water Acts.

The Report of Colonel Bolton, C.E., the Water Examiner appointed under the Metropolis Water Act, 1871, which will be found in the Appendix, page 120, describes in detail the alterations and extensions of the works of the Metropolitan Water Companies made during the year, and the steps which have been taken by each Company as regards the provision of a constant water supply. It will be seen from this Report that the certified expenditure of the Companies on works and improvements during the year was 271,091*l.* 6*s.* 7*d.*, and that of the total number of houses supplied, viz., 643,752 there were at the date of the Report 202,443 for which there was a constant service.

The number of houses to which a constant supply was given for the first time during the year was 22,165, being 4,798 in excess of the number so supplied for the first time during the previous year.

From the Report of Dr. Frankland, which will be found at page 137 of the Appendix, it appears that the average daily volume of water delivered in the inner circle of the Metropolis during the year was 141,266,549 gallons, being a decrease of nearly 8,000,000 gallons per day as compared with the previous year. This quantity is calculated by Dr. Frankland to correspond to an average daily consumption of 28·6 gallons per head of population. The decrease in the amount of water consumed, notwithstanding the increase in the number of persons supplied, shows that there was considerably

less waste of water in the Metropolis than in former years. With respect to the quality of the water, Dr. Frankland states that of the deep well waters the best was that supplied by the Kent Company; of the river water abstracted from the Lea, that sent out by the New River Company was the best; whilst of the Thames waters the best average supply was that delivered by the Lambeth Company. He further reports that the deep well water remained of the same excellent quality throughout the year; that the water drawn from the Lea contained less organic matter than in either of the three preceding years, and was throughout the year of better quality than that of the Thames, which, though it contained more organic matter than in 1881, was of better quality than in the years 1878 to 1880. Dr. Frankland considers that the comparative freedom from excessive organic pollution, which has been observed in the Thames since 1875, is probably due to the increased storage space acquired by the Companies drawing from this source. In consequence of this storage capacity, he says, it is no longer necessary to impound the worst flood waters.

The results of Dr. Frankland's observations respecting the efficiency of the filtration to which the Thames and Lea waters were subjected by the Companies during the year are recorded in Tables which will be found at pages 142 and 143 of the Appendix. From one of these tables it appears that these waters, when examined by him were found to be on 89 occasions during the past year clear and transparent and on 29 occasions slightly turbid; on no occasion are they reported to have been very turbid. The second table records the number of occasions during the last 14 years on which moving organisms have been found in the water, when examined microscopically. These organisms were discovered twice only during the past year, which is the smallest number of occasions on which they have been found in any year yet recorded. Dr. Frankland considers that the statistics relating to these microscopic examinations indicate that the Companies drawing their supplies from rivers have of late years exercised increased care in the treatment and filtration of the water.

From statements appended to the Report of Mr. Stoneham on his audit of the accounts of the Companies, which

will be found at p. 134 of the Appendix, it appears that the total capital of the Metropolitan Water Companies, amounted to 12,919,125*l.* 10*s.* of which 10,268,484*l.* 10*s.* was share and 2,650,641*l.* loan capital, and that the rates per cent. of dividend paid on the ordinary share capital of the Companies for the year ended the 31st of December last were as follows, viz., the New River Company 11*l.* 11*s.* 1·9*d.*, the East London, Southwark and Vauxhall, and Lambeth Companies 7*l.*, the Grand Junction Company 8½*l.*, the Chelsea Company 6¾*l.*, the Kent Company 10*l.*, and the West Middlesex Company 10*l.*, together with 17,423*l.* 6*s.* on account of back dividends.

Highway returns.

In the Appendix, p. 116, will be found a statement of the receipts and expenditure on account of the highways of the highway parishes in England and Wales for the year ended 25th March 1881, and other particulars relating thereto. From this statement it appears that the number of highway parishes in respect of which returns were made for that year was 14,828. Of this number 8,019 were included in Highway Districts in England and North Wales constituted under the Highway Acts of 1862 and 1864, 772 were comprised in the districts formed under the South Wales Highway Act, 1860, while the number of separate highway parishes not included in any highway district was 6,037, the latter being situated entirely in England and North Wales. It will be seen that in 20 counties in England and North Wales the highway parishes were either entirely, or with very few exceptions included in highway districts. In several other counties the district system has been adopted with respect to a majority of the parishes, while in seven counties no highway districts were in existence.

The receipts of Highway Boards in England and North Wales during the year amounted to 1,189,007*l.*, and the expenditure to 1,175,562*l.* The liabilities of these Highway Boards in respect of loans on the 25th March 1881 amounted to 42,607*l.* The receipts of the Highway Boards of South Wales were 53,297*l.*, and the expenditure 54,227*l.*

The receipts in respect of the highways of the separate highway parishes for the year ended 25th March 1881 amounted to 687,006*l.*, and the expenditure to 665,212*l.*

The total receipts on account of the highways of the highway districts and separate highway parishes of England and Wales were 1,929,310*l.*, and the total expenditure 1,895,001*l.*, the former total exceeding that of the previous year by 61,626*l.*, while the latter shows an increase of 40,769*l.* The continued increase in the expenditure is mainly due to the increased mileage thrown upon the highway rates by the expiration of Turnpike Trusts.

The total amount raised by highway rates in the highway districts and separate highway parishes was 1,674,848*l.*, or 68,395*l.* less than in the previous year. The contributions received from the County Authorities in aid of the maintenance of the main roads in these highway areas amounted to 201,395*l.*

The total expenditure in repairs of roads (inclusive of 8,038*l.* expended on existing turnpike roads) was 1,712,986*l.*, an increase of 43,319*l.* on that which appears in the returns relating to the previous year.

The total number of highway districts in England and North Wales under the Highway Acts of 1862 and 1864 was 376. The length of the roads included in such districts, and repairable by tne Highway Boards (exclusive of existing turnpike roads) was 66,315 miles, of which 56,717 miles consisted of ordinary highways, and the remaining 9,598 miles of main roads. The total cost of repairing the ordinary highways in highway districts for the year ended 25th March 1881 appears to have been 705,252*l.*, the average cost per mile being 12*l.* 9*s.*, while the cost of maintaining the main roads in such districts during the same year was 341,134*l.*, or on an average 35*l.* 11*s.* per mile.

In 27 districts, comprising 519 highway parishes, the Rural Sanitary Authorities exercised the powers of Highway Boards, such powers having been conferred upon them by the County Authority under section 4 of the Highways and Locomotives (Amendment) Act, 1878.

The length of the roads in separate highway parishes repairable out of the highway rates (exclusive of existing turnpike roads) was 42,194 miles, of which 38,097 miles were ordinary highways, and 4,097 miles were main roads. The total cost of the ordinary highways was

464,159*l.*, or an average of 12*l.* 4*s.* per mile, and of the main roads 151,659*l*, or 37*l.* per mile.

The length of the highways of the highway districts of South Wales was 7,264 miles, and the cost of repairing the same 42,744*l.*

The aggregate mileage of the ordinary highways in the highway districts and separate highway parishes, or in other words in the rural portion, of England and Wales was 102,078 miles, and of the main roads 13,695 miles, making together a total of 115,773 miles.

Parliamentary grant in aid of disturnpiked and main roads.

A grant was made by Parliament in the Session of 1882 in aid of the cost of maintenance of disturnpiked and main roads, the distribution of which was entrusted to us. In the Appendix, p. 372, will be found statements showing the payments made out of this grant to the several classes of Highway Authorities.

As regards England and North Wales, the Authorities entitled, under certain conditions, to contributions from the grant in respect of the main roads under their control were: 1. Urban Sanitary Authorities; 2. Highway Boards; and 3. Surveyors of Highways of separate highway parishes.

The total amount paid to Urban Sanitary Authorities (exclusive of the sums paid to Boroughs having separate Courts of Quarter Sessions) was 48,352*l.*, and of this class the Authorities to whom payments were made were 498 in number. The sums paid to Highway Boards representing Districts amounted to 78,436*l.*, while the aggregate sum paid to Surveyors of Highways of separate highway parishes was 31,275*l.* The Highway Boards who received payments from the grant were 332 in number, and the separate highway parishes to the Surveyors of which payments were made numbered 1,693. In the cases of all these Highway Authorities the payments out of the grant were made in respect of roads which were main roads within the meaning of the Highways and Locomotives (Amendment) Act, 1878, the amount paid being one-fourth of the total cost of maintenance for the year ended 25th March 1881, as allowed by the County Authority in determining the amount of repayment to be made by them under that Act.

As regards Boroughs having separate Courts of Quarter Sessions, however, this principle could not be applied as the Urban Sanitary Authorities of these Boroughs are not entitled to receive contributions from the County Authority on account of main roads. The contributions in these cases therefore were made in respect of roads disturnpiked since 1870, the amounts paid being one-fourth of the estimated annual cost of maintenance (comprising materials and labour) of the roads as turnpike roads. Of this class of Boroughs 51 were entitled to claim contributions from the grant, and the payments made to them amounted to 4,809*l.* Payments to the amount of 1,524*l.* were made upon the same basis to such parishes and districts in the Metropolis as comprised any road which had been disturnpiked since 1870.

The County Authorities of South Wales also participated in the grant, the sums paid in these cases being one-half of the average annual amount contributed by the County Authority to the County Roads Board out of the County Road Rate since 1870. The sum paid by us to these Authorities was 2,906*l.*

As regards Scotland the roads in respect of which contributions from the grant were paid were those which had been disturnpiked since 1860. The payments made by us to Road Authorities in that part of the Kingdom amounted to 20,487*l.*, of which sum 16,874*l.* was paid to the Road Authorities of Counties and Districts, and the remainder to the Authorities of Burghs.

In the distribution of this grant, payments were made by us to 2,698 Local Authorities in England, Wales, and Scotland.

The Highway Rate Assessment and Expenditure Act, 1882.

The law relating to highway rating and expenditure was amended during the year by the Highway Rate Assessment and Expenditure Act, 1882. The effect of the third section of this Act is that where under the provisions of the Poor Rate Assessment and Collection Act, 1869, the owners of small tenements are rated to the poor rate instead of the occupiers, such owners will also be rated instead of the occupiers to the Highway Rate, in every case in which the highway parish is co-extensive with the Poor Law Parish or any part of it. In these cases the Act also makes the Valuation List for

the time being in force conclusive for the purpose of the Highway Rate, as well as for the purposes of other rates (section 4), and enables an incoming highway surveyor to reimburse his predecessor for any deficiency which has been caused by the insufficiency of the rates levied during the past year, provided that such deficiency has not arisen from any neglect or default (section 5). It also cures a defect in the highway law, which had been productive of considerable inconvenience in some districts, by providing that the expenses incurred by Highway Authorities in maintaining, replacing, or setting up milestones on any highway, and in fencing by posts or otherwise a highway where such fencing is required for the protection of persons travelling thereon, shall be a lawful charge upon the highway rate (section 6). Statutory provisions relating to the accounts of Highway Authorities and their officers are extended by the Act to the accounts of waywardens in Highway Districts (section 7), and provision is made for the recovery and payment of balances certified by auditors at highway audits to be due (section 8.) The 9th section provides that where at the time of the passing of the Act part of a parish is excluded from an Urban Sanitary District, but such excluded part is, for purposes connected with the repairs of highways and the payment of highway rates, treated as forming part of the district, the owners and ratepayers of the excluded part may by resolution decide that such part shall be a highway parish; and if the resolution is approved by us, the excluded part will from a date to be fixed by us be for all purposes connected with highways, surveyors of highways, and highway rates, considered and treated as a separate highway parish.

Provisional Order under section 16 of the Highways and Locomotives (Amendment) Act, 1878.

In cases where it appears to a County Authority that any road within their county, which has ceased to be a turnpike road since the passing of the Highways and Locomotives (Amendment) Act, 1878, and by virtue of that Act has become a main road, ought to cease to be a main road and become an ordinary highway, such authority may apply to us for a Provisional Order under section 16 of the Act to reduce the road to the latter status. In the past year an application was made to us under this section by the County Authority of Kent in

reference to the road leading from Bull Green to Hothfield. The report which we received from our inspector of the local inquiry held by him in the matter, and of his inspection of the road, satisfied us that the application of the County Authority should be complied with, and we made a Provisional Order accordingly.

Turnpike trusts.

The Appendix, p. 110, contains a statement showing the receipts and expenditure of the Turnpike Trusts in England and North Wales for the year ended 25th March 1881; the effect of the Annual Turnpike Acts Continuance Act, 1882 (45 & 46 Vict. c. 52.) upon the Trusts specified therein; and various other particulars relating to Turnpike Trusts. It appears from this statement that the receipts of the Turnpike Trusts in England and North Wales during the year amounted to 184,334*l.* and the expenditure to 199,294*l.*; the number of Trusts being 184. These figures, compared with those of the previous year, show a decrease of 44,418*l.* in the receipts, while the expenditure was reduced by 47,381*l.*, and the number of Trusts by 50. The Bonded Debt was reduced from 550,237*l.* to 420,294*l.*

The reduction of 129,943*l.* which took place during the year in the Bonded Debts of the Turnpike Trusts in England and North Wales was effected by cash payments amounting to 54,357*l.*, by savings arising from compositions to the extent of 6,527*l.*, and by the extinguishment of debts to the nominal amount of 69,059*l.* in respect of which no payment was made.

Bonded Debts of 39,233*l.* were paid off at par, and compositions of 15,124*l.* were accepted in full discharge of debts of 21,651*l.*

From the statement referred to it also appears that the number of Trusts in existence on the 31st December 1864 was 1,048, and that between that date and the 1st of January 1883, the number had been reduced to 71, the length of the turnpike roads on the former date being 20,589 miles, and on the latter only 2,180 miles. Of the 71 Trusts in existence on the 1st of January last, 23 Trusts, comprising 816 miles of road, will expire between that date and the 31st of December 1888. Of the residue, 2 Trusts with 25 miles of road have been under the consideration of the Select Committee on

Turnpike Trusts, but have not yet been finally fixed to expire, 9 are scheduled in the Turnpike Acts Continuance Act, 1882, for investigation in 1883, and 37 will continue until the expiration of the terms of their local Acts at various dates from 1883 to 1893, unless Parliament in the meantime otherwise provides.

A statement of the receipts and expenditure on account of the Turnpike Roads of South Wales for the year 1881, and each of the four years immediately preceding, will be found in the Appendix, p. 113. From this statement it appears that the receipts of the County Roads Boards during 1881 amounted to 27,198*l.* (including 3,136*l.* contributed from County Road Rates), and the expenditure to 27,621*l.*

South Wales Turnpike Roads Act, 1882.

The South Wales Turnpike Roads Amendment Act, 1882, abolished the power previously exercised by us of appointing a general superintendent of county roads in South Wales. Moreover, it enabled the County Roads Board of each county in South Wales to place at the disposal of any District Roads Board money and materials for the maintenance of the turnpike roads in their district, and for carrying out improvements.

Orders issued.

The Appendix, p. 452, also contains a table, showing the number of orders connected with local government and public health which were issued by us under seal during the year. The orders are classified with reference to the principal subjects to which they relate.

Parliamentary returns.

A list of the reports, returns, and other documents prepared by us and presented to Parliament, during the session 1882, will be found in the Appendix, p. 460.

III. *Local Taxation and Valuation.*

Local Taxation Returns, 1881.

A summary of the Local Taxation Returns (England) for the year 1881 will be found in the Appendix (p. 346). The total amount received by the Local Authorities in the year was 55,346,631*l.*, and the total sum expended 52,590,875*l.*

Compared with the previous year, the total receipts showed an increase of 1,405,880*l.*; and the expenditure an increase of 2,337,898*l.*

Revenue from Local Taxation during 11 years ended with 1881.

The revenue received by the local authorities from local taxation for each of the 11 years from 1871 to 1881 is shown in the following Table:—

Year.	Rates.	Tolls, Dues, Fees, and Rents.	Duties.	Total of Local Taxes.
	£	£	£	£
1871 -	17,405,711	3,859,974	314,290	21,579,975
1872 -	18,034,803	3,853,363	326,930	22,215,096
1873 -	18,571,538	4,056,752	328,741	22,957,031
1874 -	19,821,209	4,118,890	355,034	24,295,133
1875 -	21,952,733	4,180,645	332,853	26,466,231
1876 -	22,476,484	4,469,655	366,735	27,312,874
1877 -	23,289,320	4,597,907	445,940	28,333,167
1878 -	24,352,437	4,715,476	452,071	29,519,984
1879 -	25,685,896	4,756,349	456,583	30,898,828
1880 -	25,926,943	4,678,211	437,946	31,043,100
1881 -	26,808,225	5,197,152	428,746	32,434,123

Local Loan transactions.

The loan transactions of the local authorities during the year, and the total amounts of the local loans outstanding at the close of the year were as follows:—

Security for Loans.	Loans raised during the year.	Loans paid off with Interest.	Loans outstanding at close of the Year.
	£	£	£
I. Rates, chiefly - -	12,522,781	8,694,965	113,819,131
II. Tolls, Dues, and Rents, chiefly - - - -	1,708,644	2,275,924	30,516,107
III. Duties - - - -	—	—	
Grand Total - -	14,231,425	10,970,889	144,335,238

Local Taxation; non-remunerative and remunerative.

Following the division of local imposts into non-remunerative and remunerative sections on the plan adopted in the Reports of previous years, the following results are obtained:—

NON-REMUNERATIVE AND REMUNERATIVE LOCAL TAXATION, 1880–81.

LOCAL TAXATION.	Total Receipts.	Levied by Local Taxation.	Total Expenditure.
	£	£	£
Non-remunerative - - -	17,595,964	12,038,946	16,983,885
Remunerative - - -	37,750,667	20,395,177	35,606,990

When the non-remunerative and the remunerative expenditure of local taxes are tabulated for a series of years it becomes evident that the increase in the charges on these imposts is chiefly due to the growth of the expenditure for remunerative purposes.

NON-REMUNERATIVE AND REMUNERATIVE LOCAL TAXATION for 11 Years, 1871–81.

YEAR.	EXPENDED by LOCAL AUTHORITIES for:—		
	Non-remunerative Purposes.	Remunerative Purposes.	TOTAL.
	£	£	£
1870–71 -	15,455,654	14,492,376	29,948,030
1871–72 -	16,198,096	14,987,375	31,185,471
1872–73 -	15,987,265	16,677,690	32,664,955
1873–74 -	16,173,873	20,197,226	36,371,099
1874–75 -	15,674,696	25,031,646	40,706,342
1875–76 -	15,878,850	27,466,341	43,345,191
1876–77 -	17,539,290	30,866,625	48,405,915
1877–78 -	16,341,772	32,986,874	49,328,646
1878–79 -	17,495,062	34,680,846	52,175,908
1879–80 -	16,684,640	33,568,367	50,253,007
1880–81 -	16,983,885	35,606,990	52,590,875

Large increase of the remunerative Local Taxation.

Comparing 1881 with 1871, the increase in the non-remunerative expenditure was 1,528,231*l.* or 9·9 per cent. only; while that in the remunerative expenditure was 21,114,614*l.* or 145·7 per cent.

Rates in Urban and in Rural Districts.

The following statement shows, approximately, the revenue from rates in Urban and in Rural Districts during the last ten years:—

REVENUE obtained from RATES in all ENGLAND; 1881 compared with 1871.

Local Rates.	1871.	1881.	Increase.
1. CHIEFLY URBAN.			
(*a.*) *Extra Metropolitan.*	£	£	£
Borough Rate	1,016,917	1,349,128	6,649,010
Urban Sanitary Rate	2,598,250	8,912,022	
Lighting and Watching (Leeds)	10,652	13,679	
(*b.*) *Metropolitan.*			
Poor Rate	1,621,962	1,807,197	1,494,680
Local Management Rate	1,319,076	1,754,341	
Board of Works Rate	350,906	620,957	
Metropolitan Police Rate	571,561	555,844	
City of London Police Rate	42,965	75,511	
Ditto Ward Rate	4,239	6,142	
Burial Board Rate	7,866	7,696	
School Board Rate	- -	585,567	
2. URBAN AND RURAL.			
Poor Rate (Extra Metropolitan)	6,546,886	6,162,648	622,236
Burial Board Rate (Extra Metropolitan).	81,687	122,533	
School Board Rate (Extra Metropolitan).	- -	976,818	
Church Rate	23,186	11,996	
3. CHIEFLY RURAL.			
County Rate	1,052,839	1,188,514	870,688
Rural Police Rate	572,957	556,723	
Highway Rate	1,346,800	1,821,041	
Rural Sanitary Rate	- -	283,896	
Lighting and Watching Rate (less Leeds).	31,095	24,205	
TOTAL	17,199,844	26,836,458	9,636,614

NOTE.—Sewers and Drainage Rates, not being levied for general purposes, are excluded from this statement.

The larger part of the Treasury subvention in aid of local taxation is shown by the accounts which the Local Authorities render to us, but some grants are not included in these accounts. The whole amount provided in the estimates for the three years ended with the 31st of March 1882 is stated hereunder:— Treasury subventions.

GRANTS IN AID OF LOCAL TAXES (ENGLAND).

——	1879–80.	1880–81.	1881–82.
	£	£	£
Metropolitan Fire Brigade -	10,000	10,000	10,000
Rates on Government Property	165,783	161,768	161,945
Poor Law and Sanitary Officers	271,389	295,568	302,947
Pauper Lunatics - -	395,000	412,000	427,000
Registrars of Births and Deaths	9,700	10,000	9,700
Criminal Prosecutions - -	180,568	180,547	179,652
Police, Metropolitan - -	452,800	451,705	460,402
„ County and Borough -	762,000	764,000	779,000
Prisons, Reformatories, and Industrial Schools - -	610,600	614,635	640,314
School Boards - - -	1,025	1,000	1,400
Berwick Bridge - - -	90	91	91
TOTAL - - -	2,858,955	2,901,314	2,972,451

It is to be observed, however, in connexion with the Table that in the year 1882 a sum of 250,000*l.* was voted in respect of main roads in England and Scotland.

In our Report for 1881–82 we took occasion to contrast Crown valuations of real property with poor rate valuations by means of figures given in the Reports of the Commissioners of Inland Revenue. Local Valuations contrasted with Crown Valuations.

The following table gives the comparison for six consecutive years:—

COMPARISON of the VALUATION of the PROPERTIES assessed for CROWN PURPOSES with the same PROPERTIES assessed for LOCAL PURPOSES.

YEAR.	THE METROPOLIS.		THE REST OF ENGLAND.	
	(1.) Gross Value in Income Tax Assessment under Schedule A.	(2.) Valuation under Valuation (Metropolis) Act.	(3.) Gross Value in Income Tax Assessment under Schedule A.	(4.) Valuation by Assessment Committees.
	£	£	£	£
1874–5	24,192,112	24,145,246 19,884,462	107,689,995	97,812,540 84,049,290
1875–6	24,680,427	24,634,183 20,293,708	109,096,483	99,218,361 85,195,785
1876–7	26,471,597	26,468,310 21,846,071	115,608,677	103,847,680 89,348,593
1877–8	27,186,876	27,182,877 22,401,953	117,392,385	106,030,930 91,113,973
1878–9	27,981,759	27,996,840 23,0 4,552	118,966,392	107,399,088 92,039,521
1879–80	28,444,287	28,423,199 23,353,813	123,107,104	111,355,633 95,390,307

NOTE.—In Columns (2) and (4) the first of the bracketed figures against each year represents the "Gross Estimated Rental" and the second the "Rateable Value."

Contrasts in certain counties.

In the last year the gross estimated rental in the Metropolis where the Valuation (Metropolis) Act is in force was short of the Crown assessment by ·07 per cent. only, while the English counties (exclusive of the Metropolis) under the Union Assessment Committee Act fell below it by 10·48 per cent., and the Welsh counties were 11·85 per cent. under the Crown valuation. Some counties rank much below the average; for example, Bedford, in its gross estimated rental at the latest date, was 21·17 per cent., Lincoln 23·99 per cent., and Anglesea 33·22 per cent. under the gross annual value in Schedule A. It should be remembered that many properties rateable for local taxes are excluded from these comparisons because, for the purposes of the Inland Revenue, they are no longer classed in Schedule A. as real property.

The valuation to the Poor Rates, which comes into force on Lady-day for England generally, but for the Metropolis on the 6th April, is shown for each of the 11 parochial years ended with 1881 by the following table :—

Valuation to the Poor Rate in 1871 and 10 following years.

VALUATION TO THE POOR RATE IN ALL ENGLAND.

Year.	Valuation to the Poor Rate.		Increase over preceding Year.	
	Gross estimated Rental.	Rateable Value.	Gross estimated Rental.	Rateable Value.
	£	£	£	£
1871	126,473,924	107,398,242	3,108,077	2,992,938
1872	129,038,976	109,447,111	2,565,052	2,048,869
1873	132,571,829	112,392,362	3,532,853	2,945,251
1874	136,408,462	115,646,631	3,836,633	3,254,269
1875	140,524,319	119,079,589	4,115,857	3,432,958
1876	146,989,979	124,587,474	6,465,660	5,507,885
1877	150,980,679	127,948,380	3,990,700	3,360,906
1878	154,606,467	131,021,019	3,625,788	3,072,639
1879	157,968,723	133,769,875	3,362,256	2,748,856
1880	160,248,997	135,645,473	2,280,274	1,875,598
1881	165,143,300	139,636,307	4,894,303	3,990,814

Compared with 1871, the gross estimated rental in force for 1881 has increased 38,669,376*l.* and the rateable value 32,238,065*l.*, or, taken respectively, 30·6 per cent. and 30·0 per cent.

The valuation in force for the parochial year 1881 has been taken from the Parliamentary Return, No. 172, printed by order of the House of Commons, Session 1882. In that return will be found the gross estimated rental and the rateable value of each parish in England.

Valuation in every Parish, 1881.

Valuation to the Poor Rate in the Metropolis in 1871 and 10 following years.

The valuation for the Metropolis in the same years is as follows :—

VALUATION TO THE POOR RATE IN THE METROPOLIS ONLY.

Year.	Valuation to the Poor Rate.		Increase over preceding Year.	
	Gross estimated Rental.	Rateable Value.	Gross estimated Rental.	Rateable Value.
	£	£	£	£
1871	24,103,083	19,830,051	1,960,377	1,642,358
1872	24,388,000	20,053,137	284,917	223,086
1873	24,756,711	20,349,210	368,711	296,073
1874	25,148,033	20,672,765	391,322	323,555
1875	25,574,366	21,019,507	426,333	346,742
1876	27,602,649	22,763,087	2,028,283	1,743,580
1877	28,464,833	23,444,876	862,184	681,789
1878	29,027,795	23,912,681	562,962	467,805
1879	29,682,269	24,447,444	654,474	534,763
1880	30,421,071	25,057,781	738,802	580,337
1881	33,384,851	27,544,446	2,963,000	2,487,000

The gross estimated rental, it will be observed, has increased by 9,281,768*l.* and the rateable value by 7,714,395*l.*, or 38·5 and 38·9 per cent. respectively.

Changes in the staff.

It is with great regret that we have to state that Sir John Lambert, K.C.B., has, in consequence of impaired health, resigned the office of Secretary to the Board. We cannot too strongly express our sense of the eminent qualifications which he possessed for the discharge of the important and responsible duties which devolved on him as the Chief Permanent Officer of the Department, and our appreciation of the valuable services which he has rendered for many years past in connexion with the legislation affecting Local Authorities, and in the administration by us of the powers with which we have been entrusted as the Central Authority. We are not

unmindful that to his tact, discretion, and administrative ability is to be attributed to a great extent the success which has attended the bringing into harmonious working the functions of the several Departments of the State which were transferred to the Local Government Board on its constitution in 1871. The Government availed themselves so frequently of the assistance of Sir John Lambert as a confidential adviser in the preparation of measures, many of which were not within the province of the Board, that we cannot but feel that his retirement is not only a loss to the Department but to the public service generally.

We regret also to have to state that Mr. Danby Palmer Fry has resigned the office of Legal Adviser to the Board.

Mr. Hugh Owen, one of our Assistant Secretaries, has been appointed to succeed Sir John Lambert as Secretary of the Board, and Mr. John Francis Rotton, also an Assistant Secretary, has been appointed Legal Adviser in the place of Mr. Fry.

Mr. Samuel Butler Provis and Mr. Cornelius Neale Dalton have succeeded Mr. Owen and Mr. Rotton as Assistant Secretaries of the Board.

All which we humbly submit to Your Majesty.

CHARLES W. DILKE.

President.

APPENDICES.

APPENDICES.

Appendix A.

Circulars, &c. issued by the Local Government Board.

	Page
No. 1. Alkali, &c. Works Regulation Act, 1881 (Registration of Works).—General Order	3
No. 2. Election of Guardians.—Circular Letter to Boards of Guardians	4
No. 3. Danger from Fire in Workhouses.—Circular Letter to Boards of Guardians	6
No. 4. Casual Paupers suffering from Small-Pox.—Circular Letter to Boards of Guardians	8
No. 5. Rates on Outgoing Occupiers.—Circular Letter to District Auditors	9
No. 6. Pauper Lunatics (Repayments from Parliamentary Grant).—Circular Letter to Boards of Guardians	10
No. 7. Pauper Interments.—Circular Letter to Boards of Guardians	10
No. 8. Infectious Diseases in Workhouses.—Circular Letter to Boards of Guardians	11
No. 9. Age of Children sent to Imbecile Asylum.—Circular Letter to Boards of Guardians (Metropolis)	12
No. 10. Model Byelaws: Mortuaries and Offensive Trades.—Circular Letter to Urban Sanitary Authorities	13
No. 11. Model Byelaws: Mortuaries.—Circular Letter to Rural Sanitary Authorities	14
No. 12. Model Byelaws: Mortuaries and Offensive Trades.—Circular Letter to Rural Sanitary Authorities in the exercise of certain Urban Powers	15
No. 13. Model Byelaws.—(With Prefatory Memorandum) as to Mortuaries	15
No. 14. Model Byelaws.—(With Prefatory Memorandum) as to Offensive Trades	20
No. 15. Provisional Orders.—Circular Letter to Sanitary Authorities, enclosing copy of Instructions with regard to Applications to the Board for Provisional Orders under the Public Health Act, 1875	38
No. 16. Ditto.—Instructions	40

Page

No. 17. Hop Pickers.. — Circular Letter to Sanitary Authorities - 42

No. 18. Relief of Wives of Men in the First Class Army Reserve. — Circular Letter to General Inspectors, enclosing Memorandum on subject - - - 43

No. 19. Ditto : Memorandum.—Extracts from the Regulations for Mobilization of First Class Army Reserve for Permanent Service - - - - - - 44

No. 20. Poor Law Legislation in the Session of 1882.—Circular Letter to Boards of Guardians - - - - 45

No. 21. Divided Parishes and Poor Law Amendment Act, 1882, and Poor Rate Assessment and Collection Act, 1869, Amendment Act, 1882.—Circular Letter to Overseers of the Poor - - - - - 50

No. 22. Auditors' Reports.—Circular Letter to District Auditors - 52

No. 23. Public Works Loans Act, 1875.—Circular Letter to Sanitary Authorities, calling attention to section 13 of the Act - - - - - - - - 53

No. 24. Artizans Dwellings Act, 1882.—Circular Letter to Urban Sanitary Authorities - - - - - 53

No. 25. Ditto.—Circular Letter to Boards of Guardians (Metropolis) - - - - - - - 55

No. 26. General Order.—Prescribing Register of Securities under 45 & 46 Vict. c. 58. s. 14 - - - 56

No. 27. Periodical Return of Sickness in Metropolitan Pauper Schools.—Circular Letter to Boards of Guardians, &c. (Metropolis), enclosing Form of Return - - 60

No. 28. Ditto.—Form of Return - - - - 61

No. 29. Officers' Entertainments.—Circular Letter to Metropolitan Boards of Guardians and Managers of Sick Asylum Districts - - - - - - 62

No. 30. Casual Poor Act, 1882.—Circular Letter to Boards of Guardians enclosing copies of General Order - - 62

No. 31. Ditto.—General Order - - - - - 64

No. 32. Casual Paupers.—General Order rescinding Regulations - 71

No. 1.

"ALKALI, &C. WORKS REGULATION ACT, 1881."—(REGISTRATION OF WORKS.)

To the Owners of Works to which "The Alkali, &c. Works Regulation Act, 1881," applies ;—
And to all others whom it may concern.

WHEREAS by sections 11 and 12 of "The Alkali, &c. Works Regulation Act, 1881," provision is made for the registration of the works to which that Act applies, subject to conditions to be prescribed from time to time by the Local Government Board :

Now therefore, We, the Local Government Board, hereby prescribe as follows :—

Article 1. The registration of the works shall be at the office of the Local Government Board, Whitehall, London, S.W.

Article 2. The application for a certificate of registration of any work shall contain the following particulars :—

(*a.*) The description of the work, and its name, if any.
(*b.*) The parish or place where the work is carried on.
(*c.*) The date when the work was erected.
(*d.*) If the work is closed, the date when it was closed.
(*e.*) The name and address of the owner, lessee, occupier, or other person carrying on the work.

Article 3. The application for a certificate shall be addressed to the Local Government Board and sent by post to or delivered at the office of the Board.

Article 4. If the application is in due form, and in the case of a work erected after the 1st day of January 1882, or which has been closed for a period of 12 months, the work is found to be furnished with such appliances as are required by section 12 of the said Act, a certificate in the Form A. set forth in Schedule hereto shall be issued by the Local Government Board upon the receipt by them of a post office order for the amount of the stamp duty payable thereon under the said Act, such order to be made payable to the Postmaster General at the Parliament Street Post Office, Whitehall, London, S.W.

Article 5. Where any change occurs in the ownership of a work, or in any other particulars stated in the register, and written notice thereof is given to an inspector in accordance with the provisions of the said Act, the inspector shall forward such notice to the Local Government Board and the register shall be amended by inserting such alteration accordingly, and an endorsement shall be made by the Local Government Board on the certificate in accordance with the Form B. set forth in the said Schedule.

Given under the Seal of Office of the Local Government Board, this seventh day of January, in the year one thousand eight hundred and eighty-two.

(L.S.) J. G. DODSON, *President.*

JOHN LAMBERT, *Secretary.*

SCHEDULE.

FORM (A.)

Certificate under "The Alkali, &c. Works Regulation Act, 1881."
(44 & 45 Vict. c. 37.)

(Stamp.) [England and Wales.]

This is to certify that the work known as the _____

_____

situate at _____, of which work _____

is [*or* are] at present the _____ [or which work is at present carried on by _____] has been duly registered in accordance with the provisions of "The Alkali, &c. Works Regulation Act, 1881," in that behalf.

Dated this day of , in the year one thousand eight hundred and eighty- .

Signed _____

Assistant Secretary,

Acting on behalf of the Local Government Board under the authority of their General Order dated the 26th day of May 1877.

This Cerificate will remain in force until the 1st day of April, one thousand eight hundred and eighty- .

FORM (B.)

Endorsement on Certificate in case of Change of Ownership, &c.

This is to certify that _____ has been duly registered as the _____ of the [*or* the person carrying on the] _____ in the place of _____

Date _____

Signed _____

Assistant Secretary,

Acting on behalf of the Local Government Board under the authority of their General Order dated the 26th day of May 1877.

No. 2.

ELECTION OF GUARDIANS.

Local Government Board, Whitehall, S.W.,
15th February 1882.

SIR,

I AM directed by the Local Government Board to point out that, by the General Order which they issued on the 29th of October last with reference to the election of guardians, it is provided that, whenever the day appointed for the performance of any act relating to the election shall be a Sunday or Good Friday, a Bank Holiday, or any day appointed for public fast or thanksgiving, such act shall be performed on the day next following, unless it is one of the days excluded

as aforesaid, in which case the act shall be performed on the day following such excluded day. The Order further provides that, subject as aforesaid, the intervals between the dates fixed by the General Order of the Board of the 14th of February 1877, for the several subsequent proceedings shall be preserved by a corresponding postponement of each proceeding.

The Board have reason to believe that, owing to exceptional circumstances, there may in the present year be some doubt as to what may be the effect of the General Order of the 29th of October as regards the proper day for the performance, in the forthcoming election, of the several acts and proceedings prescribed in connexion with the election. With the view of obviating any misunderstanding in this matter, the Board have thought it advisable to explain in this circular what, in the present year, will be the correct dates for the performance of the several acts and proceedings relating to the election.

The date of the publication of the notice of election is not affected by the recent Order, and accordingly the latest day for the publication will be the 15th of March. The earliest day for the delivery of nomination papers will likewise be that mentioned in the Order of the 14th of February 1877, namely, the 15th of March; but in consequence of the 26th of March falling on Sunday, the last day for the delivery will be postponed to the 27th of March. Hence, the earliest day for the preparation of the list of persons nominated will be the 28th of March instead of the 27th, all the proceedings subsequent to the delivery of nomination papers being, by operation of the recent Order, postponed for one day. Under the Order of 1877 the day fixed for the delivery of voting papers is the 7th of April; but this proceeding is, in the present year, deferred one day by reason of the postponements above-mentioned, and the delivery will, therefore, take place on the 8th of April, which is not one of the days excluded by the Order of the 29th of October last.

Ordinarily, the voting papers would be collected on the day following the delivery. In the present year, however, the following day being Sunday, the collection would have been postponed to Monday; but that day being Easter Monday, and a Bank Holiday, the Order of the 29th of October last will render a further postponement necessary, and the collection will, therefore, take place on Tuesday, the 11th of April. The casting up of the votes will, of course, commence on the next day, namely, the 12th of April. Persons who may not have received voting papers on the 8th of April, and who are desirous of voting, may make application to the returning officer, under Art. 21 of the Order of the 14th of February 1877, not later than noon on the 12th of April; and voting papers which, through the default of the returning officer or the persons appointed or employed to collect them, may not have been collected on the 11th of April, may be delivered to the returning officer, in the manner prescribed by the Article referred to, before noon on the 12th of April.

The Board append a tabular statement showing the days appointed for the several proceedings above referred to.

I am, &c.
JOHN LAMBERT,
Secretary.

To
The Clerk to the Guardians.

TABLE SHOWING THE DATES FOR THE PERFORMANCE OF THE SEVERAL PROCEEDINGS IN CONNECTION WITH THE ELECTION OF GUARDIANS IN THE YEAR 1882.

PROCEEDING.	DATE OF PERFORMANCE.
Publication of Notice of Election - -	Latest day for publication, 15th of March.
Delivery of Nomination Papers - -	Earliest day, 15th of March. Latest day, 27th of March.
Preparation of List of Persons nominated -	Earliest day, 28th of March.
Delivery of Voting Papers - - -	8th of April.
Collection of Voting Papers - - -	11th of April.
Casting up of Votes - - -	12th of April and following days as may be necessary.
Application to the Returning Officer under Art. 21 of the General Order of the 14th of February 1877, by Persons who have not received Voting Papers on the 8th of April, and who are desirous of voting.	Not later than noon on the 12th of April.
Delivery to Returning Officer of Voting Papers not collected on the 11th of April.	Before noon on the 12th of April.

No. 3.

DANGER FROM FIRE IN WORKHOUSES.

Local Government Board, Whitehall, S.W.,
14th March 1882.

SIR,

I AM directed by the Local Government Board to state that their attention has been drawn by their Inspectors to the want of appliances in poor law institutions for meeting any outbreak of fire, or ensuring the safety of the inmates.

The Board do not refer to the means that might be necessary to cope with a large fire, but to the necessity that exists in all poor law institutions for having some ready means always at hand of dealing with an outbreak of fire in its earliest stage, and of aiding the escape of the inmates from the buildings. The Board think it right, therefore, to point out a few simple precautions which, in their opinion, should be adopted in connexion with this matter.

It is desirable that the guardians should require a frequent inspection of the premises to be made by the master, superintendent, or other responsible officer for the special purpose of seeing that no collections of paper, chopped wood, rags, straw, or other combustible substances are allowed in dangerous positions such as in cupboards, closets, or cellars, or under stairs, or in close proximity to buildings; to ascertain that the various chimney flues are duly swept, and that no accumulations of soot take place in them, and that the flues themselves are not likely to become overheated so as to endanger the building; also to see that the various appliances are in their proper places, and that the tanks and cisterns are kept supplied with water, and that the means of communication between the wards occupied by the inmates and the apartments of the chief officers are in working order. A report of this inspection should

be made to the guardians at their first meeting in each month, or such other regular period as may be convenient.

For the purpose of giving notice of an outbreak of fire, it is important that every distinct part of the building, whether detached or not, should have proper means of communication, either directly or indirectly, with the chief officer's apartments, and for this object efficient bell communication should be supplied.

With reference to the appliances for extinguishing fire, it is of the utmost importance that at every workhouse and poor law institution each distinct building occupied by inmates should possess some handy fire-extinguishing apparatus. The most simple means for this object is to have several buckets kept for the sole purpose, always charged with water on each floor and ready for instant application. These buckets may further be most usefully supplemented by a small hand pump, such as is used by the Metropolitan and other fire brigades. It is very portable, and can be worked by one man or woman without previous training; it occupies but little space, is inexpensive, and effectual.

Portable chemical fire engines or extincteurs would be found useful in large institutions, where they could be placed under the charge of responsible paid officers, who should be fully instructed as to their use, and they should be kept in some conspicuous position easily accessible by the officers trained to use them.

In large buildings, and where the supply of water is sufficient, a system of main pipes and hydrants may with advantage be provided and arranged so that hose pipes fitted with nozzles may be fixed in a few moments, thus allowing a powerful jet of water to be thrown on to any part of the interior or exterior of each of the blocks of building. Where there is not a sufficient head of water to give the required pressure, a small manual fire engine drawing its supply from a well, tank, or stream would be useful.

With reference to the means of exit for the inmates in case of fire or of alarm of fire, the buildings should be carefully examined with a view to ascertain the best way of rapidly removing the inmates of each block or ward should the necessity arise.

Amongst the various appliances for aiding persons to escape from a building when on fire and the ordinary means of exit are cut off the following may be referred to:—

The usual fire escape or ladder, with wire and canvas shoot behind it, the whole been mounted on a carriage and wheels.

Ladders in short lengths fitting into each other, which should be kept in convenient and accessible places.

Jumping sheets. When these are resorted to a specially-made stout canvas sheet, 10 feet square, bound with strong rope, and fitted with handles of the same material at intervals of 1 foot apart and all round it, and strengthened by strips of canvas or webbing underneath would be found most valuable, and might be used with considerable safety if held tightly by ten or a dozen men, and a bed, truss of hay, or other soft substance be placed beneath it.

Stout knotted lines. These if kept on each floor or landing may also be the means of saving life.

Whatever form of apparatus is supplied to any building for fire prevention, or for fire extinguishing, or for aiding the escape of inmates of a building on fire, it is requisite that constant care should be taken to have the apparatus preserved in order, so as to be fit for immediate use.

I am directed to request that the foregoing remarks may receive the attention of the guardians, and it would be satisfactory to the Board to be informed of the steps which the guardians have taken to ensure the safety of the workhouse and its inmates in the event of an outbreak of fire.

I am, &c.
JOHN LAMBERT,
Secretary.

To
The Clerk to the Guardians.

No. 4.

CASUAL PAUPERS SUFFERING FROM SMALL-POX.

Local Government Board, Whitehall, S.W.,
SIR, *17th March* 1882.

THE attention of the Local Government Board has recently been drawn to certain cases in which poor persons have been admitted into, and discharged from, casual wards whilst suffering from small-pox. In several instances, it has been ascertained that the persons so affected had, on the nights immediately preceding their application for admission into the casual wards, slept at other casual wards. The Board, therefore, think it right to bring the matter specially under the notice of the guardians, as it would appear that disease is not unfrequently spread by the casual poor.

The Board do not doubt that the guardians will readily take such measures as will tend, as far as practicable, to diminish the risk of infection, and they would remind the guardians that the regulation contained in Article 11 of the General Order of the 22nd November 1871, provides that—

> " In the event of any casual pauper being ill, the master of the
> " workhouse, or the superintendent of the casual ward shall, as
> " soon as practicable, obtain the attendance of the medical officer,
> " who shall give directions as to the treatment of such pauper;
> " and if, in the opinion of the medical officer, the pauper cannot
> " be properly treated in the casual ward, he shall be removed to
> " the workhouse, and be admitted as an ordinary inmate."

The Board consider it highly important that all cases of illness should receive prompt medical attention, and they request that the guardians will be good enough to give strict directions to the master of the workhouse or superintendent of the casual wards, as the case may be, that he should at once procure the attendance of the medical officer whenever any casual pauper appears to be ill, or there is any doubt upon the subject.

I am, &c.
JOHN LAMBERT,
Secretary.

To
The Clerk to the Guardians.

No. 5.

Rates on Outgoing Occupiers.

Local Government Board, Whitehall, S.W.,
29th March 1882.

Sir,

You are aware that in a recent case (the overseers of St. Werburgh *v.* Hutchinson L. R. 5. Ex. d. 19.) it has been decided that section 16 of the 32 and 33 Vict. c. 41., does not relieve an occupier, who is assessed to a poor rate, but ceases to occupy before the rate has been fully discharged, from his liability to pay the whole rate, unless there is some tenant who succeeds to the occupation of the hereditament so as to become liable to pay a proportionate part of the rate.

Your attention has probably also been drawn to the decision of the Court of Appeal in the case of Hare *v.* Putney, L. R. 7, Q. B. d. 223, in which it was held that, although there may be an incoming occupier, the outgoing occupier is liable until the name of the succeeding tenant has been entered in the rate book.

The Board are informed that these decisions are at variance with the practice which had previously prevailed in numerous parishes, and applications have been made to them to introduce a measure into Parliament for the purpose of bringing the provisions of the Act before referred to into harmony with sub-section 3 of section 211 of the Public Health Act, 1875, which enacts that, if any person assessed or liable to the general district rate ceases to occupy the premises in respect whereof he is assessed before the end of the period for which the rate is made, and before the same is fully paid off, he shall be liable to pay only such part of the rate as may be in proportion to the time during which he continues to be occupier.

It has been further represented to the Board that it is desirable that where an outgoing ratepayer has paid the full rate he should be empowered to recover from an incoming occupier, or in case there should be none from the overseers, a part of the rate so paid by him proportionate to the period which the rate was intended to cover.

Under these circumstances I am directed by the Board to request that you will favour them at your early convenience with replies to the following questions:—

1. Whether the decisions above referred to have been generally acted upon in your district, and if so, whether they have given rise to complaints on the part of the parish officers or ratepayers.

2. Whether the provision contained in sub-section 3 of section 211 of the Public Health Act, 1875, has, so far as your experience extends, been found to work well, or whether, on the contrary, it has proved to be inconvenient in practice, and led to irregularity.

3. Whether you consider it desirable that as regards outgoing occupiers the law relating to the collection of the poor rate should be placed on the same footing as that relating to the general district rate.

4. Whether an outgoing occupier who has paid the full rate should be empowered to recover any portion of the amount from an incoming occupier, or the parish authorities.

I may add that the Board will be glad to receive any observations, as resulting from your experience, which you may be desirous of offering on the subject to which this letter relates.

I am, &c.

John Lambert,
Secretary.

(*Sent to the District Auditors.*)

No. 6.

PAUPER LUNATICS.—REPAYMENTS FROM PARLIAMENTARY GRANT.

Local Government Board, Whitehall, S.W.,
SIR, *10th May* 1882.

I AM directed by the Local Government Board to state that they have had under their consideration the mode of making the claims for repayment from the Parliamentary grant voted in aid of the cost of the maintenance of Pauper Lunatics confined in County, Borough, or Private Lunatic Asylums.

The Board are of opinion that these claims may in future be made annually, instead of half-yearly, thereby effecting a saving of labour both to the clerks to the guardians and to the district auditors, and preventing many mistakes that are found in the returns with regard to repayments by relatives in consequence of their being made half-yearly. The returns should be forwarded immediately after they have been certified by the Auditor, and in no case later than the 14th of March.

The forms now in use may be made available for this change by striking out the word "half" in the heading and at the top of the seventh column.

I am, &c.
JOHN LAMBERT,
Secretary.

To
The Clerk to the Guardians.

No. 7.

PAUPER INTERMENTS.

Local Government Board, Whitehall, S.W.,
SIR, *22nd May* 1882.

I AM directed by the Local Government Board to draw the attention of the guardians to the subject of the arrangements for the disposition and burial of the bodies of poor persons dying in workhouses. Cases have recently been brought under the notice of the Board where, in consequence of the defective nature of these arrangements and of the want of proper supervision on the part of the workhouse officers, unfortunate mistakes have occurred, resulting in the burial of the body of a pauper under a wrong name, in the interment taking place elsewhere than in the appropriate cemetery, or in the performance of a burial service over a coffin not containing a body.

It is scarcely necessary to point out that mistakes, such as these, are calculated not only to wound the feelings of the relatives of the deceased, but to occasion public scandal, and the Board are extremely desirous that all necessary precautions should be taken to prevent their recurrence.

In the first place the deadhouse or mortuary, in which the bodies of persons dying in the workhouse or infirmary are deposited previously to interment, should be devoted exclusively to the purpose for which it is designed, and it should never be placed under the care of pauper inmates, without frequent and systematic supervision. It appears to the Board that the proper disposition of the bodies as well as the necessary arrangements for their decent interment in the churchyard or cemetery,

should be under the immediate direction of the master of the workhouse. Moreover, it is desirable that shells should be provided for the bodies until coffins are ready for their reception.

In order that there may be no mistake as to identity, there should be affixed to the shroud, immediately after the laying out of the body, two legibly written tickets each bearing the names of the deceased, the one to be placed upon the outside of the coffin and the other to remain attached to the shroud. Moreover, the Board are of opinion that each body after it is placed in the coffin, but before the coffin is closed, should be inspected by the master of the workhouse, accompanied by the nurse or other subordinate officer who knew the deceased person when living, and who should be able to identify the body. If the master be prevented by unavoidable circumstances from doing this, the duty would devolve upon the assistant master or other responsible officer of the workhouse.

Further, care should be taken that a proper coffin plate, giving the names, age, and date of the death of the deceased, should be affixed to the lid of each coffin before it is closed, and this plate ought not under any circumstances to be removed. When a proper coffin plate cannot be conveniently provided, the particulars referred to may be inscribed in suitable letters on the coffin itself.

Whilst the above precautions seem proper in all cases, they are especially needful in workhouses of considerable size, where it frequently happens that several bodies are in the mortuary at the same time awaiting interment, and where therefore unless due care is taken confusion is liable to occur.

The Board have thought it right to offer these suggestions in preference to prescribing regulations upon this subject; and they trust that, should any other safeguards against mistakes occur to the guardians they may be at once adopted.

It will doubtless appear to the guardians desirable that the Visiting Committee should from time to time ascertain by inquiry whether the arrangements contemplated by this Circular are duly observed.

In conclusion the Board would remind the guardians of unions from whence the unclaimed bodies of paupers dying in the workhouse are sent to a hospital or medical school that the provisions of the Anatomy Act should in all such cases be most strictly complied with.

I am, &c.

JOHN LAMBERT,
Secretary.

To
The Clerk to the Guardians.

No. 8.

INFECTIOUS DISEASES IN WORKHOUSES.

Local Government Board, Whitehall, S.W.,
19th June 1882.

SIR,

I AM directed by the Local Government Board to inform you that it has been brought to their notice that, in some workhouses where cases of small-pox have been under treatment, persons not properly protected by vaccination have been placed in attendance upon the patients, and that the neglect of this precaution has in some instances resulted in the spread of the disease, not only among the attendants,

but also among the ordinary inmates of the workhouse. The Board, therefore, think it necessary to point out that, whenever cases of small-pox occur in or are introduced into workhouses, it is of great importance that the nurses and other persons employed to attend upon the patients, or brought into personal contact with them, should at once be re-vaccinated as a protection against the disease, unless they have themselves had the small-pox, or have been successfully re-vaccinated within a sufficiently recent period.

The Board desire, also, to impress upon the guardians the necessity of strict measures being taken to prevent communication between the inmates of the fever wards and those of the workhouse, as the spread of disease has, even when the wards referred to were themselves properly isolated, been traced to the absence of this precaution.

The Board are also desirous that, whenever there is an outbreak of small-pox or any other dangerous infectious disease in a workhouse, the fact should immediately be reported to them by the medical officer, with a statement showing what provision has been made for the isolation and treatment of the patients, and for preventing the spread of the disease among the inmates.

I am, &c.
JOHN LAMBERT,
Secretary.

To
The Clerk to the Guardians.

No. 9.

AGE OF CHILDREN SENT TO IMBECILE ASYLUM.

Local Government Board, Whitehall, S.W.,
SIR, *24th July* 1882.

THE attention of the Local Government Board has been drawn to the fact that several children between two and three years of age have been admitted into the Metropolitan District Asylum for Children at Darenth.

It must be evident that no trustworthy judgment can be formed as to the intellectual condition of children of such tender age. In similar institutions, the earliest age of admission has been fixed at seven years. Bearing in mind, however, the inconvenience that may result from the detention in a workhouse of children mentally afflicted, the Board consider that children of five years old, if their condition requires it, may properly be sent to Darenth, but that prior to that age they should be retained in the workhouse.

I am, &c.
JOHN LAMBERT,
Secretary.

To
Clerk to the Guardians of the

No. 10.

U. S. A. (5.)

Public Health Act, 1875.

(38 & 39 Vict. c. 55.)

Model Byelaws.—Mortuaries and Offensive Trades.

Local Government Board, Whitehall, S.W.,

Sir, *25th July* 1882.

I am directed by the Local Government Board to advert to their former circulars respecting the model byelaws which they had caused to be prepared for the use of sanitary authorities, and to forward herewith printed copies of two additional series of model clauses, having for their subjects, the management of mortuaries, and the regulation of certain offensive trades.

In the preface to each series the Board have discussed the various questions suggested by the enactment authorizing the byelaws, and also the practical points which will require consideration by the sanitary authority in connexion with the model clauses.

As in the case of the several series of model byelaws previously issued by the Board, they have, in the present instance, arranged for the supply to those authorities who propose to adopt the model clauses, of copies of the clauses on foolscap paper with a margin for annotations.

The series now issued complete the model code of byelaws. Of the numerous subjects for which byelaws may be made under the provisions of the Public Health Act, 1875, and the incorporated enactments, two only have been omitted from the code, and in explanation of this omission the Board deem it necessary to offer a few remarks.

By section 169 of the 38 & 39 Vict. c. 55., it is enacted that any urban authority may, if they think fit, provide slaughter-houses, and that they shall make byelaws with respect to the management and charges for the use of any slaughter-houses so provided.

The Board have been called upon to revise and confirm many series of byelaws for the regulation of public slaughter-houses; but these slaughter-houses have, for the most part, been provided in pursuance of the powers conferred by Local Acts. The matters as to which byelaws are authorized by such Local Acts are generally described with some minuteness, and with reference to the requirements of the particular establishment to which each Act relates.

In the few instances in which application has been made to the Board for confirmation of byelaws with respect to public slaughter-houses provided under section 169 of the Public Health Act, 1875, they have found that local trade usages, the extent and plan of the premises, and the administrative arrangements of the sanitary authority render it necessary to embody in each set of byelaws rules which are altogether special in their characteristics. The experience of the Board leads them to the conclusion that, to ensure good management, sanitary authorities may be advised to rely mainly upon the structural fitness of the premises, the provision of needful appliances and conveniences, and the efficient discharge by their officers and servants of duties having for their object the maintenance of the premises in a cleanly and wholesome condition. The control thus exercised by a sanitary authority, as owners of a public slaughter-house, may, if necessary, be supplemented

by a few byelaws such as may be readily framed upon the basis of some of the clauses comprised in the model series relating to private slaughter-houses.

In the third part of the 5th Schedule to the Public Health Act, 1875, is included a statutory provision which, by the operation of section 343, is still in force as if enacted in the body of that Act. The provision is that contained in the 24 & 25 Vict. c. 61. s. 21, which empowers an urban authority, constituted a burial board, from time to time to pass byelaws for the preservation and regulation of all burial grounds within their jurisdiction. The Board have not thought it expedient to frame any model byelaws under this provision, as no application has at any time been made to them by an urban authority desirous of exercising the powers thus conferred.

I am, &c.
JOHN LAMBERT,
Secretary.

To
The Clerk to the Urban Sanitary Authority.

No. 11.

R. S. A. (5.)

PUBLIC HEALTH ACT, 1875.
(38 & 39 Vict. c. 55.)

MODEL BYELAWS.—MORTUARIES.

Local Government Board, Whitehall, S.W.,
SIR, *25th July* 1882.

I AM directed by the Local Government Board to advert to their former circulars respecting the model byelaws which they had caused to be prepared for the use of sanitary authorities, and to forward herewith printed copies of an additional series of model clauses relating to the management of mortuaries.

In the preface to the series the Board have discussed the various questions suggested by the enactment authorizing the byelaws, and also the practical points which will require consideration by the sanitary authority in connexion with the model clauses.

As in the case of the several series of model byelaws previously issued by the Board, they have, in the present instance, arranged for the supply, to those authorities who propose to adopt the model clauses, of copies of the clauses on foolscap paper with a margin for annotations.

I am, &c.
JOHN LAMBERT,
Secretary.

To
The Clerk to the Rural Sanitary Authority.

No. 12.

R. S. A. (6.)

PUBLIC HEALTH ACT, 1875.

(38 & 39 Vict. c. 55.)

MODEL BYELAWS.—MORTUARIES AND OFFENSIVE TRADES.

Local Government Board, Whitehall, S.W.,

SIR, *25th July* 1882.

I AM directed by the Local Government Board to advert to their former circulars respecting the model byelaws which they had caused to be prepared for the use of sanitary authorities, and to forward herewith printed copies of two additional series of model clauses, having for their subjects the management of mortuaries, and the regulation of certain offensive trades.

In the preface to each series the Board have discussed the various questions suggested by the enactment authorizing the byelaws, and also the practical points which will require consideration by the sanitary authority in connexion with the model clauses.

As in the case of the several series of model byelaws previously issued by the Board, they have, in the present instance, arranged for the supply, to those authorities who propose to adopt the model clauses, of copies of the clauses on foolscap paper with a margin for annotations.

I am, &c.

JOHN LAMBERT,

To *Secretary.*

The Clerk to the Rural Sanitary Authority.

No. 13.

(Inclosure to Nos. 10, 11, and 12.)

MODEL BYELAWS ISSUED BY THE LOCAL GOVERNMENT BOARD FOR THE USE OF SANITARY AUTHORITIES.

XV.—MORTUARIES.

Memorandum.

By section 141 of the Public Health Act, 1875 (38 & 39 Vict. c. 55.), it is enacted as follows:—

"Any local authority may, and if required by the Local Govern-
"ment Board shall, provide and fit up a proper place for the reception
"of dead bodies before interment (in this Act called a mortuary), and
"may make byelaws with respect to the management, and charges for
"use of the same; they may also provide for the decent and economical
"interment, at charges to be fixed by such byelaws, of any dead body
"which may be received into a mortuary."

The next section (142) is in these terms:—

"Where the body of one who has died of any infectious disease is
"retained in a room in which persons live or sleep, or any dead body
"which is in such a state as to endanger the health of the inmates of
"the same house or room is retained in such house or room, any justice
"may, on a certificate signed by a legally qualified medical practi-

" tioner, order the body to be removed, at the cost of the local autho-
" rity, to any mortuary provided by such authority, and direct the
" same to be buried within a time to be limited in such order; and
" unless the friends or relations of the deceased undertake to bury the
" body within the time so limited, and do bury the same, it shall be
" the duty of the relieving officer to bury such body at the expense of
" the poor rate, but any expense so incurred may be recovered by the
" relieving officer in a summary manner from any person legally liable
" to pay the expense of such burial."

" Any person obstructing the execution of an order made by a justice
" under this section shall be liable to a penalty not exceeding five
" pounds."

With regard to the enactments above cited, it is to be observed that they are intended to meet the requirements of all cases in which a mortuary is used, whether voluntarily or compulsorily. It is, however, chiefly in relation to those cases where the mortuary is used or otherwise than in pursuance of an order of a justice under section 142, that it is important to consider to what extent sanitary authorities should avail themselves of their power of making byelaws, and also by what other means they may provide for the efficient management of the mortuary, and for the removal and reception of the dead with least danger to the living.

It cannot be doubted that, apart from such cases as would come within the operation of section 142, there are many instances in which manifest benefit would result from the use of the mortuary for the reception of the dead during the period preceding burial. In the interests of the public health, it is clearly desirable that those who might otherwise seek permission to remove a corpse to the mortuary should not be deterred by regulations of undue stringency, or by any apparent disregard of care and decency in the internal arrangements or management of the building.

It is quite possible that at some future time, when the voluntary use of mortuaries may have become more general than at present, sanitary authorities may find it expedient to exercise more fully their power of making byelaws under section 141. Under existing circumstances, however, it appears to the Board that sanitary authorities may be advised to rely upon good administrative arrangements rather than upon byelaws for the proper management of their mortuaries. For certain purposes byelaws will doubtless be necessary in most districts for which mortuaries have been provided. To such purposes the clauses comprised in the accompanying model series of byelaws have reference.

The first and second of these clauses are designed to secure the removal of the corpse for burial within a specified period. The third and fourth clauses are intended for the prevention of misbehaviour. The fifth clause has been framed with the view of requiring undertakers to convey empty shells from the premises without delay.

With regard to the first and second clauses, it may be well to point out that byelaws in these terms will not be operative in any case where a corpse has been removed to the mortuary in pursuance of a justice's order under section 142. In such a case, the limitation of the time within which the corpse is to be buried is a matter for which the justice is expressly authorised to give the necessary direction.

In other cases, however, it is important that the sanitary authority should have the power of enforcing the removal of corpses after a sufficient interval. Ordinarily it may be assumed that there will be no difficulty in securing compliance with the requirements of this byelaw. The person who has obtained permission to use the mortuary for the

reception of the corpse will, in the majority of instances, be in a position to provide for its removal within the prescribed time. But it may be well to draw attention to the fact that the provision in section 142, which requires the relieving officer, in default of the friends or relations of the deceased, to bury at the expense of the poor rate, is confined to cases where the removal of the body to the mortuary has been ordered by a justice and he has directed the burial to take place within a limited time.

With reference to other cases, it is to be observed that, although the 7 & 8 Vict. c. 101., s. 31, empowers the board of guardians to bury, at the cost of the poor rate, the body of any poor person which may be within their parish or union, there is no obligation upon them to incur this expense unless the body is lying in the workhouse or on premises belonging to the guardians. If, therefore, the body of a poor person has been received in the mortuary it by no means follows that the guardians or their duly authorized officer could be rendered responsible for the observance of the byelaw prescribing the period within which the body must be removed. It is possible that cases may occur where this responsibility may attach to the guardians or their officer in consequence of the directions which they may have given in pursuance of the enactment above-mentioned, and in all such cases the guardians or their officer, on being informed of the requirements of the byelaws, would no doubt take steps to ensure compliance with those requirements. Where, however, the cost of burial is only partially defrayed out of the poor rates, the sanitary authority, in dealing with an application for permission to use the mortuary, may sometimes find it necessary to ascertain that the applicant is, either voluntarily or by obligation, in a position to control the arrangements with regard to the burial, and may therefore, in the event of permission to use the mortuary being granted at his request, be held liable for neglect to comply with the byelaw limiting the time within which the body should be removed. But, upon the whole, it may be reasonably expected that the instances in which the sanitary authority may deem it incumbent upon them to enforce the byelaws as to the removal of bodies will be extremely rare.

The sanitary authority will probably find that the practical questions requiring consideration in connexion with any mortuary which they may provide will chiefly relate to (1.) the selection of a suitable site and structure, and (2.) the adoption of such administrative arrangements as will best serve the purpose of inducing persons to avail themselves of the facilities afforded by the mortuary for the safe and decent keeping of the dead during the interval before interment.

Upon these points, the Board have to offer the following suggestions.

1. *As to Site and Structure.*

In the choice of a site, care should be taken to ensure that the buildings to be erected thereon shall, as far as practicable, be isolated and unobtrusive. It may, indeed, be desirable to place the buildings on the site in such a position and manner as to admit of their being concealed from public view until the entrance gate to the premises has been passed.

The buildings should be substantial structures of brick or stone. In their external appearance attention should be paid to such architectural features as may serve to convey the impression of due respect for the dead.

Every chamber intended for the reception of corpses should be on the ground or basement floor.

In addition to such chambers, the premises should, if possible, comprise:

(*a.*) A waiting room for visitors to the mortuary and for the use of mourners assembling there for funeral purposes;

(*b.*) A caretaker's dwelling-house; and

(*c.*) A shed or out-house for the keeping of shells or other necessary appliances.

For these and other structural arrangements provision may be made in the manner indicated in the plan appended to this memorandum.

In the construction of each chamber intended for the reception of the dead, care should be taken to ensure convenience, decency, cleanliness, and coolness.

The chamber should be lofty and the area of its floor sufficient to allow freedom of movement between the slabs or tables on which the dead are to be placed.

There should be a ceiling to the chamber, or, if it be open to the roof, there should be a double roof with a space of 8 inches at least between the outer and inner covering or with the addition of an intervening layer of felt.

Louvres or air-gratings under the eaves will be the best means of ventilation.

The chamber should, if practicable, be lighted by windows on the north side. If it is necessary to place windows on the south, east, or west sides, external louvre blinds should be provided for the windows.

The floor should be paved evenly and closely. The material used may be stone or slate; but a uniform cement floor is preferable.

Water should be laid on so as to be drawn from a tap within the chamber.

Shelves which may conveniently placed around the interior of the chamber, and tables which may occupy any part of its area should preferably be made of slate slabs. If stone is used it should be smoothed on the upper surface and free edges.

The shelves and tables should be placed so that their upper surfaces may be at a height of $2\frac{1}{2}$ feet or of not more than 3 feet above the floor.

The ceiling and the internal surface of the walls should be whitewashed. The outside of the roof should also be whitened.

The entrance to the chamber should be direct, without the intervention of any passage.

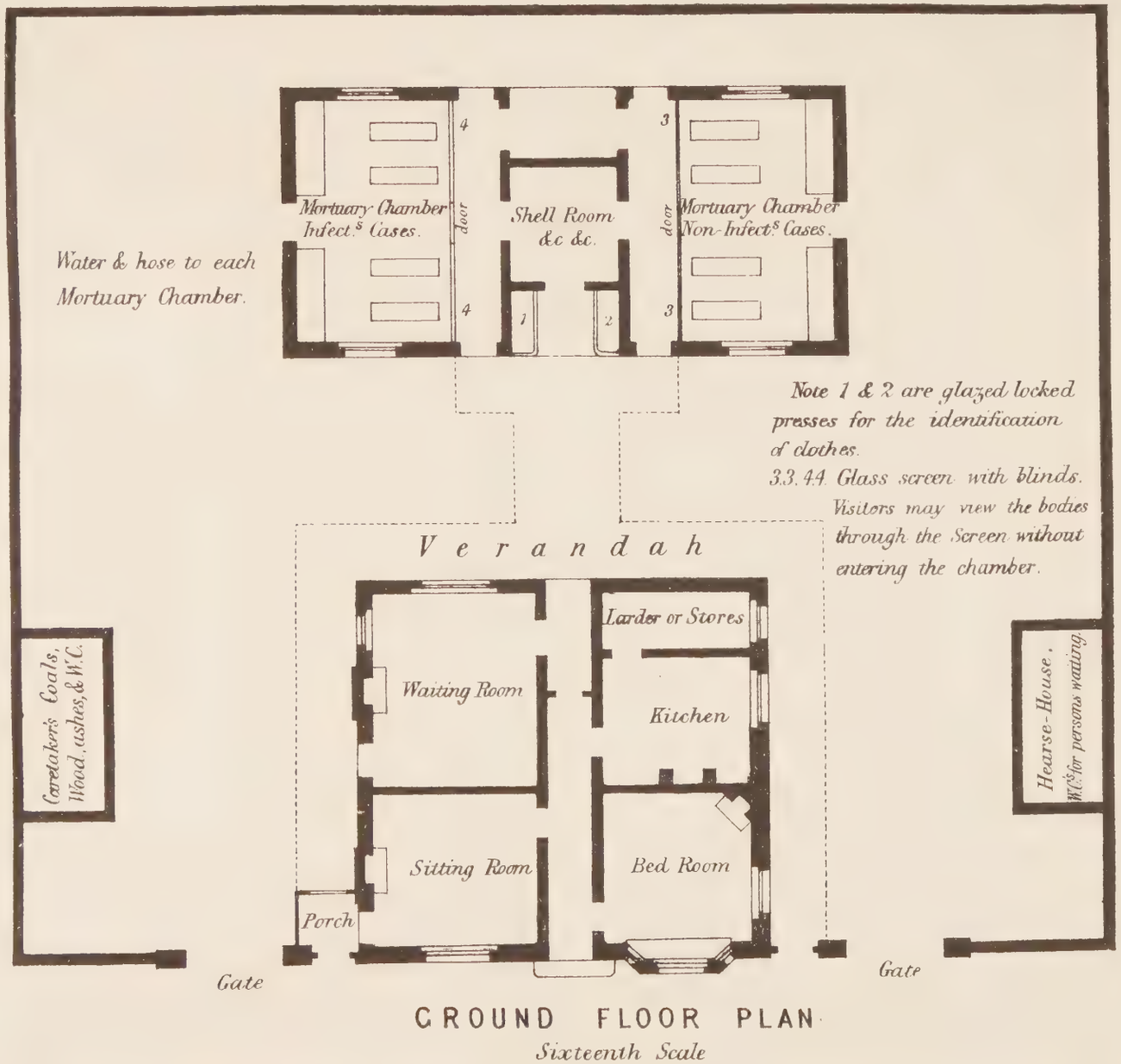
The number of chambers should be at least two, so that one may be appropriated exclusively for the bodies of persons who have died of infectious disease, and the other for the bodies of persons whose death has been due to other causes. It may be expedient to place these chambers as far apart as may be practicable, so that persons visiting the chamber used for the reception of the bodies of those who have died of non-infectious disease may have no reason to fear infection.

2. *As to Administrative Arrangements.*

No obstacle or difficulty should be placed in the way of receiving a body at any hour of the day or night. To obviate unnecessary applications for reception at night, it will probably be found sufficient to affix to the entrance gate a notice requesting persons to abstain, except in cases of emergency, from applying for the admission of bodies during certain specified hours of the night.

A caretaker should reside upon the premises, and his duties should comprise the general management of the mortuary, the maintenance of

MORTUARY FOR TOWN OF 100.000 INHABITANTS.



GROUND FLOOR PLAN

Sixteenth Scale

DANGERFIELD LITH 22 BEDFORD ST COVENT GARDEN

cleanliness, decency, and good order, and the keeping of such books or registers as the regulations of the sanitary authority may prescribe.

It will probably be found expedient to require the caretaker, in the case of each corpse received upon the premises, to ascertain and record the following particulars, namely :

(*a.*) Christian name and surname of the deceased ;

(*b.*) Sex ;

(*c.*) Age ;

(*d.*) Cause of death ;

(*e.*) Number of house and name of street or other description of the place whence the body has been brought to the mortuary ;

(*f.*) Name and address of the person by whose order the body has been brought to the mortuary ; and

(*g.*) Date of the removal of the body for burial.

It should, however, be clearly understood by the caretaker, that he would not be justified in refusing to admit a corpse on the ground that these particulars cannot be given at the time when the application for admission is made to him.

A sufficient number of shells of different sizes should be kept at the mortuary in charge of the caretaker, and he should be empowered to to lend them to undertakers or other responsible persons for the conveyance of bodies to the mortuary.

The shells when not in use should be kept in a shed or other suitable place.

Each shell should be constructed of strong wood, painted externally. The interior of the shell and the inner surface of its cover should be lined with tinned copper.

Each shell after being used and before being deposited in the shed or other place for storage should be thoroughly cleansed by the caretaker.

No dead body should be received upon the premises unless it is enclosed in a shell or coffin.

JOHN LAMBERT,
Secretary.

Local Government Board,
25th July 1882.

BYELAWS WITH RESPECT TO THE MANAGEMENT OF A MORTUARY.

1. Every person who, in pursuance of permission obtained from the sanitary authority, has caused the body of one who has died of an infectious disease to be deposited in the mortuary shall cause the body to be removed therefrom for the purpose of interment within a period of days from the date of death.

2. Every person who, in pursuance of permission obtained from the sanitary authority, has caused the body of one who has died of a non-infectious disease to be deposited in the mortuary shall cause the body to be removed therefrom for the purpose of interment within a period of days from the date of death.

3. Every person for the time being employed in depositing a body in the mortuary, or in removing a body therefrom, shall, while so employed, conduct himself in all respects with decency and propriety.

4. Every person who, being a friend or relative of one whose body has been deposited in the mortuary, has been admitted to view the body shall, while on the premises, conduct himself in all respects with decency and propriety.

5. Every person who, for the purpose of depositing a body in the mortuary, uses a shell which has not been provided by the sanitary authority shall, in every case where the body is transferred from the shell before

being carried from the premises to the place of burial, cause the shell, as soon as conveniently may be after the transfer of the body therefrom, to be removed from the premises.

6. Every person who shall offend against any of the foregoing bye-laws shall be liable for every such offence to a penalty of , and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority.

Provided nevertheless, that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

No. 14.

(Inclosure to Nos. 10 and 12.)

Model Byelaws issued by the Local Government Board for the use of Sanitary Authorities.

XVI.—Offensive Trades.

Memorandum.

By section 112 of the Public Health Act, 1875 (38 & 39 Vict. c. 55.), it is enacted as follows :—

" Any person who, after the passing of this Act, establishes within " the district of an urban authority, without their consent in writing, " any offensive trade; that is to say, the trade of—

" Blood-boiler, or
" Bone-boiler, or
" Fellmonger, or
" Soap-boiler, or
" Tallow-melter, or
" Tripe-boiler, or
" Any other noxious or offensive trade
" business or manufacture,

" shall be liable to a penalty not exceeding fifty pounds in respect of " the establishment thereof, and any person carrying on a business so " established shall be liable to a penalty not exceeding forty shillings " for every day on which the offence is continued, whether there has " or has not been any conviction in respect of the establishment " thereof."

The next section (113) is in these terms :—

" Any urban authority may from time to time make byelaws with " respect to any offensive trades established with their consent either " before or after the passing of this Act, in order to prevent or " diminish the noxious or injurious effects thereof."

It will be seen from the last cited enactment that, in order to bring a trade within the operation of the byelaws which the urban authority are empowered to make, the trade must belong to the class designated " offensive," and must have been established with the consent of the authority either before or after the passing of the Public Health Act, 1875.

In ordinary cases there will, of course, be little difficulty in determining whether the circumstances and date of the original establishment of any particular trade are such as to render it subject to the control which the urban authority may exercise by means of their byelaws.

But in relation to a trade other than those expressly mentioned in s. 112, that is to say, the trades of a blood-boiler, bone-boiler, fellmonger, soap-boiler, tallow-melter, and tripe-boiler, the question whether the materials and processes are such as to constitute a "noxious or offensive trade, business or manufacture" is one which will often be found to require careful consideration, and an accurate knowledge of the facts of the case.

When any such question comes before the urban authority they may be advised to give special heed to the principles which may be deduced from the decisions in Wanstead Local Board of Health, app. Hill, resp. (13 C.B. n.s. 479; 32 L.J. n.s. M.C. 135; 9 Jur. n.s. 972.), Passey, app., Oxford Local Board, resp. (43 J.P. 622), and Cardell, app., New Quay Local Board, resp. (39 J.P. 742.)

The first and last of these cases arose under s. 64 of the Public Health Act, 1848 (11 & 12 Vict. c. 63.) an enactment of which the greater part has in substance been reproduced in s. 112 of the Public Health Act, 1875. The case of Passey, app., Oxford Local Board, resp., had reference to the last-mentioned enactment.

In Wanstead Local Board of Health, app., Hill, resp., the question submitted for the opinion of the Court of Common Pleas was whether the trade or manufacture of brick-making was a noxious, or offensive business, trade, or manufacture, intended to be designated by s. 64. of the Public Health Act, 1848. The justices had found that brick-making was not necessarily such a business, trade, or manufacture, and their finding was upheld by the Court of Common Pleas. In the course of the argument, and, according to one report, in giving judgment Lord Chief Justice Erle drew attention to the fact that all the trades mentioned in the 11 & 12 Vict. c. 63. s. 64, specifically dealt with substances which were, or must necessarily become in themselves offensive. To this observation Mr. Justice Willes is reported as having referred in the following terms:—"It may well be held that a brick-"yard is not within the meaning of the Act because, as observed by "My Lord, all the trades specified in the section involve the collection "of large quantities of animal matter which, however, the operation "may be carried on, must by putrefaction be a nuisance to the neigh-"bourhood. But that is not the case with brick-making, and the "general words of the section must be controlled by the specific words "which precede them."

In Passey, app., Oxford Local Board, resp., it appeared that the appellant had recently established without the consent, and within the district of the local board, the business of a bone and rag merchant. On behalf of the respondents, three witnesses, viz., the inspector of nuisances, the medical officer of health, and a neighbour, gave evidence before the justices in support of the allegation that the trade as carried on by the appellant was noxious and offensive. The first witness deposed that in consequence of complaints he visited the premises in the month of August, and found the effluvia from the bones and rags very offensive. The medical officer of health gave evidence to the effect that on the occasions of his visiting the premises, in the months of August and October, he found a noxious smell which in his judgment made the trade an offensive one. He was also of opinion that the smell when bad was injurious to health. The neighbour deposed that he had many times noticed offensive smells from the premises; that he had twice

been made sick by these smells, and that his wife also had been ill from the came cause. Seven witnesses were called on behalf of the appellant, and it was contended by his counsel that the trade was not *ejusdem generis* with the six trades set out in s. 112 of the 38 & 39 Vict. c. 55. or analogous thereto. The justices, however, in the result found that the business was as a matter of fact a noxious and offensive one, and that, as a matter of law, it was *ejusdem generis* with the six trades specified in s. 112. Upon a case stated for the opinion of the Queen's Bench Division, Lord Chief Justice Cockburn, in giving judgment, observed, " The justices in this case found as a matter of fact that it was " a noxious trade. I agree that that is not enough, and that it must " also be one that is *ejusdem generis* with those specified in the 112th " section. I notice that those mentioned seem to include animal matter " in some form. Here there is animal matter in the bones, and the " mere exposure of green bones may be very offensive. I think the " justices were right in their decision."

In the third case, Cardell, app., New Quay Local Board, resp., the justices had found that the appellant had newly established the trade of a manure merchant and dealer in artificial manures at New Quay, within the district of the local board, and without their consent. From the case stated for the opinion of the Queen's Bench Division, it appeared that, upon the hearing of the information, the appellant admitted that he had established, since the adoption of the Local Government Act, 1858, by the district of New Quay, and was carrying on within that district, the business or trade of an artificial manure merchant. He also admitted that he sold there, but did not manufacture artificial manures; and that he had kept at one time 25 tons of a manure called corn manure, composed of dissolved beans and sulphuric acid. The respondents did not offer evidence to show that the trade, as carried on by the appellant, had been either noxious or offensive to residents in the locality of his building. The respondents contended that the trade of an artificial manure dealer, storing quantities of 25 tons at a time, was of itself noxious and offensive. On the other hand, it was urged, on behalf of the appellant, that the trade as conducted by him, not being one of those enumerated in the 11 & 12 Vict. c. 63. s. 64, it was incumbent on the respondents to show that the trade was either offensive or noxious before the statute could be made applicable. The appellant also adduced the evidence of the medical officer of health and of another medical man residing and practising in the district. The former said that, on visiting the stores, he did not find them noxious nor was he offended; that the deposit of manure was not noxious; that the smell might annoy a person, and that he thought that the newly establishing of a manure business in a town might be offensive to many people. The other medical witness testified that he had not discovered that the stores were offensive in the least; that they certainly were not noxious; that all animal matter formerly contained in the manure had been destroyed by the action of the sulphuric acid, and that the earthy substances only remained.

The question of law arising for the opinion of the Court was, whether the trade, as conducted by the appellant, was such a trade as was prohibited by the 11 & 12 Vict. c. 63. s. 64, " and this without proof on " the part of the respondents of the trade being carried on in such a " manner as to be noxious or offensive."

In giving judgment for the appellant, Mr. Justice Mellor observed, " We cannot say that as a matter of law this business is within the " section, and is offensive. It is a question of fact for the justices " whether, in point of fact, it is offensive. The evidence stated did

" not support such a finding." Mr. Justice Quain added, "We cannot " say that this trade is necessarily offensive. That must depend on " the evidence, and here there was none."

From the above cited cases it seems to follow that, in seeking to establish an analogy between a particular trade and those specified in s. 112 of the Public Health Act, 1875, the urban authority should attach much importance to the identity or similarity of the materials used in its processes. If a trade can be shown to involve the collection of large quantities of animal matter, or of substances which, without anything being done to them, must be or by progress of time must necessarily become a nuisance to the neighbourhood, it is probable that the terms of s. 112 will be found sufficiently comprehensive to include such a trade.

But in order that a trade may be brought within the operation of that enactment, the urban authority should, in every case, be in a position to adduce adequate testimony in support of their allegation that the trade is noxious or offensive. That the Court of Summary Jurisdiction may be satisfied that the particular trade is noxious or offensive, and that their finding may be supported by the evidence, it is clearly essential that the urban authority should in every case be able to lay before the Court well ascertained facts as to the processes of the trade, and to show how their results may be noxious or offensive.

In the present series of model byelaws it will be seen that the Board have included, in addition to the clauses relating to the trades specified in s. 112 of the Public Health Act, 1875, byelaws for the regulation of the trades of a blood-drier, a leather-dresser, a tanner, a fat-melter or fat-extractor, a glue-maker, a size-maker, and a gut-scraper.

The Board may explain that, in embodying regulations as to these trades in their model series, they have been influenced by the knowledge that the substances used and the nature of the processes are such as, under ordinary circumstances, might be readily shown to be analogous to those of the trades specified in s. 112.

But although the Board do not anticipate that there will be any difficulty in bringing these trades within the scope of the last-mentioned enactment, the urban authority will bear in mind that, if in any case they should be compelled to have recourse to proceedings before a Court of Summary Jurisdiction, they should be prepared with proof that the particular trade is being carried on in such a manner as to be noxious or offensive.

The Board may add that the Lords Commissioners of Her Majesty's Treasury have authorized the Controller of the Stationery Office to reprint copies of that portion of the Report on Effluvium Nuisances by Dr. Ballard, one of the medical inspectors of the Board, which originally formed part of the supplement to their Sixth Annual Report, and which contains much valuable information respecting the several trades above referred to.

These copies will be on sale by the agents of Her Majesty's Stationery Office, viz.:—

Messrs. Knight & Co., 90, Fleet Street;
Messrs. Shaw & Sons, Fetter Lane; and
Messrs. Hadden, Best, & Co., 227, Strand;

at the price of 4*s.* a copy.

JOHN LAMBERT,
Secretary.

Local Government Board,
25th July 1882.

BYELAWS WITH RESPECT TO THE TRADE OF A BLOOD-BOILER.

1. Every blood-boiler shall cause all blood which has been received upon the premises where his trade is carried on, and which is not required for immedate use to be stored in such a manner and in such a situation as to prevent the emission of noxious or injurious effluvia therefrom.

2. Every blood-boiler shall adopt the best practicable means of rendering innocuous all vapour emitted, during the process of boiling, from the contents of any pan or other receptacle upon the premises where his trade is carried on.

He shall, in every case, either cause the vapour to be discharged into the external air in such a manner and at such a height as to admit of the diffusion of the vapour without noxious or injurious effects, or shall cause the vapour to pass directly from the pan or receptacle through a fire, or into a suitable condensing apparatus, or through a suitable condensing apparatus and then through a fire in such manner as effectually to consume the vapour, or to deprive the same of all noxious or injurious properties.

3. Every blood-boiler shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

4. Every blood-boiler shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

5. Every blood-boiler who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority :

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

BYELAWS WITH RESPECT TO THE TRADE OF A BLOOD-DRIER.

1. Every blood-drier shall cause all blood which has been received upon the premises where his trade is carried on, and which is not required for immediate use to be stored in such manner and in such a situation as to prevent the emission of noxious or injurious effluvia therefrom.

2. Every blood-drier shall, at the close of every working day, cause every floor or pavement elsewhere than in that part of the premises where the processes of drying and packing are carried on to be thoroughly washed.

3. Every blood-drier shall, at the close of every working day, cause every vessel or utensil and every implement which has been in use during the day upon the premises where his trade is carried on, or which is in a foul or offensive condition to be thoroughly cleansed.

4. Every blood-drier shall cause every part of the internal surface of the walls of any building upon the premises where his trade is carried on

to be kept at all times in good order and repair so as to prevent the absorption therein of any liquid filth or refuse, or any noxious or injurious matter which may be splashed thereon.

5. Every blood-drier shall adopt the best practicable means of rendering innocuous all vapour emitted, during the process of drying, from the contents of any pan or other receptacle or from any kiln or drying floor upon the premises where his trade is carried on.

He shall, in every case, either cause the vapour to be discharged into the external air in such a manner and at such a height as to admit of the diffusion of the vapour without noxious or injurious effects, or shall cause the vapour to pass directly from the pan or receptacle, or from the kiln or drying floor through a fire, or into a suitable condensing apparatus, or through a suitable condensing apparatus and then through a fire in such a manner as effectually to consume the vapour, or to deprive the same of all noxious or injurious properties.

6. Every blood-drier shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

7. Every blood-drier shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

8. Every blood-drier who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority :

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

Byelaws with respect to the Trade of a Bone-boiler.

1. Every bone-boiler shall cause all bones which have been received upon the premises where his trade is carried on, and which are not immediately required for boiling, to be stored in such a manner and in such a situation as to prevent the emission of noxious or injurious effluvia therefrom.

2. Every bone-boiler shall, at the close of every working day, cause all grease, refuse, or filth which may have been spilled or splashed, or may have have fallen or been deposited upon any floor or pavement upon the premises where his trade is carried on to be removed therefrom by scraping or some other effectual means of cleansing.

3. Every bone-boiler shall adopt the best practicable means of rendering innocuous all vapour emitted, during the process of boiling, from the contents of any pan or tank, and all vapour emitted from any chamber used for the storage of boiled bones upon the premises where his trade is carried on.

He shall, in every case, either cause the vapour to be discharged into the external air in such a manner and at such a height as to admit of the diffusion of the vapour without noxious or injurious effects, or shall cause the vapour to pass directly from the pan, tank, or chamber through a fire, or into a suitable condensing apparatus, or through a

suitable condensing apparatus and then through a fire in such a manner as effectually to consume the vapour, or to deprive the same of all noxious or injurious properties.

4. Every bone-boiler shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

He shall cause all liquid refuse, before being discharged into any drain, to be cooled in such a manner as to prevent the emission of noxious or injurious effluvia therefrom.

5. Every bone-boiler shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

6. Every bone-boiler who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority:

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

Byelaws with respect to the Trade of a Fellmonger.

1. A fellmonger shall not cause or suffer any skin which, by reason of decomposition, has become useless for the purpose of leather-dressing, to be kept for a longer time than may be necessary in any part of the premises where his trade is carried on.

2. Every fellmonger shall, at the close of every working day, cause every floor or pavement upon the premises where his trade is carried on to be thoroughly swept.

He shall, at the same time, cause all filth or refuse deposited on the floor or pavement to be collected in suitable vessels or receptacles furnished with closely fitting covers, and to be forthwith removed therein from the premises.

3. Every fellmonger shall cause the supply of water in every tank or other receptacle used upon the premises where his trade is carried on for the washing or soaking of any skin to be renewed as often as may be necessary to prevent the emission of noxious or injurious effluvia from the contents of the tank or other receptacle.

4. Every fellmonger shall cause every tank or other receptacle used upon the premises where his trade is carried on for the washing or soaking of any skin to be emptied once at least in *every day*.

He shall cause every part of the tank or other receptacle, when emptied, to be thoroughly cleansed, and shall cause all filth which has been removed therefrom to be forthwith conveyed from the premises in suitable vessels or receptacles furnished with closely fitting covers.

5. Every fellmonger shall cause all waste lime which has been taken out of any pit upon the premises where his trade is carried on to be forthwith deposited in suitable vessels or receptacles, or in a properly constructed cart or carriage which, when filled or loaded, shall be covered in such a manner as to prevent the emission of noxious or

injurious effluvia from the contents thereof, and shall, with all reasonable dispatch, be removed from the premises.

6. Every fellmonger shall cause every floor or pavement upon the premises where his trade is carried on to be kept at all times in good order and repair so as to prevent the absorption therein of any liquid filth, or refuse, or any noxious or injurious matter which may fall or be deposited thereon.

He shall also cause every part of the internal surface above the floor or pavement of every building used for any process of his trade to be thoroughly washed with hot lime-wash at least twice in *every year*, that is to say, at least once during the periods between the and day of *April*, and the and day of *October*, respectively.

7. Every fellmonger shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

8. Every fellmonger shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

9. Every fellmonger who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority:

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

Byelaws with respect to the Trade of a Tanner.

1. Every tanner shall, at the close of every working day, cause every floor or pavement upon the premises where his trade is carried on to be thoroughly swept.

He shall, at the same time, cause all hair, fleshings, and refuse fragments of skin, or other matter detached from any hide or butt to be collected and placed in a suitable part of the premises to await removal therefrom.

He shall cause the hair, fleshings, and refuse fragments which have been so collected and which are not intended to be forthwith subjected to any further trade process upon the premises to be removed therefrom with all reasonable dispatch.

2. Every tanner shall cause every beam, table, bench, knife, hammer, or other implement, or apparatus used upon the premises where his trade is carried on for the purpose of unhairing, fleshing, rounding, scudding, or stocking any hide or butt or in any other process of his trade to be cleansed from time to time as often as may be necessary to prevent any accumulation of filth, upon the beam, table, bench, knife, hammer, implement, or apparatus.

3. Every tanner shall cause all waste lime which has been taken out of any pit upon the premises where his trade is carried on to be forthwith deposited in suitable vessels or receptacles, or in a properly con-

structed cart or carriage which, when filled or loaded, shall be covered in such a manner as to prevent the emission of noxious or injurious effluvia from the contents thereof, and shall, with all reasonable dispatch, be removed from the premises.

4. Every tanner shall cause all filth which has been splashed upon any part of the internal surface of any wall of any building upon the premises where his trade is carried on to be removed by scraping or by some other effectual means of cleansing at least twice in *every year*, that is to say, at least once during the periods between the and day of *March*, and the and day of *September*, respectively.

He shall at the same time cause every part of the interior above the floor or pavement of the building to be thoroughly washed with hot lime-wash.

5. Every tanner shall cause every part of the internal surface of the walls of any building and every floor or pavement upon the premises where his trade is carried on to be kept at all times in good order and repair so as to prevent the absorption therein of any liquid filth or refuse, or any noxious or injurious matter which may be splashed or may fall or be deposited thereon.

6. Every tanner shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

7. Every tanner shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

8. Every tanner who shall offend against any of the foregoing bye-laws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority:

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

BYELAWS WITH RESPECT TO THE TRADE OF A LEATHER-DRESSER.

1. Every leather-dresser shall, at the close of every working day, cause every floor or pavement upon the premises where his trade is carried on to be thoroughly swept.

He shall, at the same time, cause all fleshings and refuse fragments of skin or other matter detached from any pelt to be collected and placed in a suitable part of the premises to await removal therefrom.

He shall cause the fleshings and refuse fragments which have been so collected and which are not intended to be forthwith subjected to any further trade process upon the premises to be removed therefrom with all reasonable dispatch.

2. Every leather-dresser shall cause every beam or board, and every knife or other implement or apparatus used in the breaking or scraping of any pelt upon the premises where his trade is carried on to be cleansed from time to time as often as may be necessary to prevent

any accumulation of filth upon the beam, board, knife, implement, or apparatus.

3. Every leather-dresser shall cause every part of the interior and exterior of every tub or other vessel or receptacle used upon the premises where his trade is carried on to hold a solution of the material known as "puer" to be thoroughly cleansed by scrubbing or by some other effectual means once at least in *every week*.

4. Every leather-dresser shall cause all waste lime which has been taken out of any pit upon the premises where his trade is carried on to be forthwith deposited in suitable vessels or receptacles, or in a properly constructed cart or carriage which, when filled or loaded, shall be covered in such a manner as to prevent the emission of noxious or injurious effluvia from the contents thereof, and shall, with all reasonable dispatch, be removed from the premises.*

5. Every leather-dresser shall cause all filth which has been splashed upon any part of the internal surface of any wall of any building upon the premises where his trade is carried on to be removed by scraping or by some other effectual means of cleansing at least twice in *every year*, that is to say, at least once during the periods between the and day of *March*, and the and day of *September*, respectively.

He shall at the same time cause every part of the interior above the floor or pavement of the building to be thoroughly washed with hot lime-wash.

6. Every leather-dresser shall cause every part of the internal surface of the walls of any building and every floor or pavement upon the premises where his trade is carried on to be kept at all times in good order and repair so as to prevent the absorption therein of any liquid filth or refuse, or any noxious or injurious matter which may be splashed or may fall or be deposited thereon.

7. Every leather-dresser shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

8. Every leather-dresser shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

9. Every leather-dresser who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority:

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

Byelaws with respect to the Trade of a Soap-Boiler.

1. Every soap-boiler shall cause all materials which have been received upon the premises where his trade is carried on, and which are not required for immediate use to be stored in such a manner and in such a situation as to prevent the emission of noxious or injurious effluvia therefrom.

2. Every soap-boiler shall adopt the best practicable means of rendering innocuous all vapour emitted, during the process of melting or boiling any materials, from the contents of any cask, tank, or pan upon the premises where his trade is carried on.

He shall, in every case, cause the vapour to pass directly from the cask, tank, or pan through a fire, or into a suitable condensing apparatus, or through a suitable condensing apparatus and then through a fire in such a manner as effectually to consume the vapour, or to deprive the same of all noxious or injurious properties.

3. Every soap-boiler shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

4. Every soap-boiler shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

5. Every soap-boiler who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority:

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence, may if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

BYELAWS WITH RESPECT TO THE TRADE OF A TALLOW-MELTER.

1. Every tallow-melter shall cause all materials which have been received upon the premises where his trade is carried on, and which are not immediately required for melting to be stored in such a manner and in such a situation as to prevent the emission of noxious or injurious effluvia therefrom.

2. Every tallow-melter shall, at the close of every working day, cause all tallow, grease, refuse, or filth which has been spilled or splashed, or has fallen or been deposited upon any floor or pavement upon the premises where his trade is carried on to be removed therefrom by scraping or some other effectual means of cleansing.

3. Every tallow-melter shall cause the internal surface of every wall of any building upon the premises where his trade is carried on to be thoroughly cleansed, and, after being so cleansed, to be thoroughly washed with hot lime-wash twice at least *every year*, that is to say, at least once during the periods between the and day of *March*, and the and day of *September* respectively.

4. Every tallow-melter shall cause every part of the internal surface of the walls of any building and every floor or pavement upon the premises where his trade is carried on to be kept at all times in good order and repair so as to prevent the absorption therein of any liquid filth, or refuse, or any noxious or injurious matter which may be splashed or may fall or be deposited thereon.

5. Every tallow-melter shall adopt the best practicable means of rendering innocuous all vapour emitted, during the process of melting, from the contents of any pan upon the premises where his trade is carried on.

He shall, in every case, either cause the vapour to be discharged into the external air in such a manner and at such a height as to admit of the diffusion of the vapour without noxious or injurious effects, or shall cause the vapour to pass directly from the pan through a fire, or into a suitable condensing apparatus, or through a suitable condensing apparatus and then through a fire in such a manner as effectually to consume the vapour, or to deprive the same of all noxious or injurious properties.

6. Every tallow-melter shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

7. Every tallow-melter shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

8. Every tallow-melter who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority :

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

Byelaws with respect to the Trade of a Fat-melter or Fat-extractor.

1. Every fat-melter or fat-extractor shall cause all materials which have been received upon the premises where his trade is carried on, and which are not immediately required for melting or extracting to be stored in such a manner and in such a situation as to prevent the emission of noxious or injurious effluvia therefrom.

2. Every fat-melter or fat-extractor shall, at the close of every working day, cause all fat, tallow, grease, refuse, or filth which has been spilled or splashed, or has fallen or been deposited upon any floor or pavement upon the premises where his trade is carried on to be removed therefrom by scraping or some other effectual means of cleansing.

3. Every fat-melter or fat-extractor shall cause the internal surface of every wall of any building upon the premises where his trade is carried on to be thoroughly cleansed, and, after being so cleansed, to be thoroughly washed with hot lime-wash twice at least in *every year*, that is to say, at least once during the periods between the and day of *March*, and the and day of *September* respectively.

4. Every fat-melter or fat-extractor shall cause every part of the internal surface of the walls of any building and every floor or pavement upon the premises where his trade is carried on to be kept at all times in good order and repair so as to prevent the absorption therein of any liquid filth, or refuse, or any noxious or injurious matter which may be splashed or may fall to be deposited thereon.

5. Every fat-melter or fat-extractor shall adopt the best practicable means of rendering innocuous all vapour emitted, during the process of melting or extracting, or during the process of greaves pressing, from the contents of any pan or press upon the premises where his trade is carried on.

He shall, in every case, either cause the vapour to be discharged into the external air in such a manner and at such a height as to admit of the diffusion of the vapour without noxious or injurious effects, or shall cause the vapour to pass directly from the pan or press through a fire, or into a suitable condensing apparatus, or through a suitable condensing apparatus and then through a fire in such a manner as effectually to consume the vapour, or to deprive the same of all noxious or injurious properties.

6. Every fat-melter or fat-extractor shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

7. Every fat-melter or fat-extractor shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

8. Every fat-melter or fat-extractor who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority:

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

BYELAWS WITH RESPECT TO THE TRADE OF A TRIPE-BOILER.

1. Every tripe-boiler shall, at the close of every working day, cause every floor or pavement upon the premises where his trade is carried on to be thoroughly washed.

2. Every tripe-boiler shall, at the close of every working day, cause every bench or table used upon the premises where his trade is carried on for the scraping of any tripe to be thoroughly cleansed by scrubbing or by some other effectual means.

3. Every tripe-boiler shall, at the close of every working day, cause all filth which has been splashed upon any part of the internal surface of any wall of any building upon the premises where his trade is carried on to be removed by washing or by some other effectual means.

He shall also cause every part of the interior above the floor or pavement of the building to be thoroughly washed with hot lime-wash four times at least in *every year*, that is to say, at least once during the periods between the and day of *March*, the and day of *June*, the and day of *September*, and the and day of *December*, respectively.

4. Every tripe-boiler shall provide a sufficient number of vessels or receptacles, properly constructed of galvanized iron, or of some other non-absorbent material, and furnished with closely fitting covers, for the purpose of receiving and conveying from the premises where his trade is carried on manure, garbage, inedible offal, filth, or refuse.

He shall, at the close of every working day, cause all manure, garbage, inedible offal, filth, or refuse which has fallen or been deposited upon any part of the premises and which is not intended to be forthwith subjected to any further trade process upon the premises to be collected in the vessels or receptacles and to be removed from the premises with all reasonable dispatch.

He shall cause the several vessels or receptacles, when not in actual use, to be kept thoroughly clean.

5. Every tripe-boiler shall cause every part of the internal surface of the walls of any building, and every floor or pavement upon the premises where his trade is carried on to be kept at all times in good order and repair so as to prevent the absorption therein of any liquid filth or refuse, or any noxious or injurious matter which may be splashed or may fall or be deposited thereon.

6. Every tripe-boiler shall adopt the best practicable means of rendering innocuous all vapour emitted, during the process of boiling, from the contents of any pan upon the premises where his trade is carried on.

He shall, in every case, either cause the vapour to be discharged into the external air in such a manner and at such a height as to admit of the diffusion of the vapour without noxious or injurious effects, or shall cause the vapour to pass directly from the pan through a fire or into a suitable condensing apparatus, or through a suitable condensing apparatus and then through a fire in such a manner as effectually to consume the vapour, or to deprive the same of all noxious or injurious properties.

7. Every tripe-boiler shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

He shall cause all liquid refuse, before being discharged into any drain, to be cooled in such a manner as to prevent the emission of noxious or injurious effluvia therefrom.

8. Every tripe-boiler shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

9. Every tripe-boiler who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority;

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

BYELAWS WITH RESPECT TO THE TRADE OF A GLUE-MAKER.

1. A glue-maker shall not cause or suffer any moist materials which, by reason of decomposition, have become useless for the purpose of glue-making to be kept for a longer time than may be necessary in any part of the premises where his trade is carried on.

2. Every glue-maker shall cause all moist materials which have been received upon the premises where his trade is carried on, and which are not required for immediate use to be stored in such a manner and in such a situation as to prevent the emission of noxious or injurious effluvia therefrom.

He shall, where practicable, cause the materials to be dried before being deposited in that part of the premises which has been appropriated for the storage thereof.

In every case, where by reason of the state of the weather or for any other sufficient cause it may be impracticable to dry the materials, he shall cause the several pieces to be subjected to the action of a sufficient quantity of milk of lime, and to be closely stacked.

3. Every glue-maker shall cause all scutch, residue, or refuse which has been removed from any boiling pan upon the premises where his trade is carried on, and which is not intended to be forthwith subjected to any further trade process upon the premises to be deposited, immediately after removal from the pan, in a suitable chamber or shed, and in such a manner as to prevent the emission of any noxious or injurious effluvia from the scutch, residue, or refuse so deposited; or to be placed, immediately after removal from the pan, in bags or sacks, casks, or barrels, which, when filled, shall be closed and fastened or covered in such a manner as to prevent the emission of noxious or injurious effluvia from the contents thereof.

In every case, where the scutch, residue, or refuse, has been deposited in a chamber or shed, he shall cause all the contents thereof to be removed from the premises within *forty-eight hours* after the deposit of the same in the chamber or shed.

4. Every glue-maker shall, at the close of every working day, cause every floor or pavement upon the premises where his trade is carried on to be thoroughly swept.

He shall cause every floor or pavement elsewhere than in that part of the premises where the processes of drying and packing are carried on to be thoroughly washed once at least in *every week*.

5. Every glue-maker shall, at the close of every working day, cause every fragment of glue, or of any material used in glue-making, which has fallen or been deposited upon any part of the premises where his trade is carried on to be collected and placed in a suitable receptacle.

6. Every glue-maker shall cause the interior and exterior of every boiling pan, and of every tank, vat, trough or other receptacle upon the premises where his trade is carried on to be thoroughly cleansed from time to time as often as may be necessary to prevent any accumulation of filth in or upon the pan, tank, vat, trough, or receptacle.

7. Every glue-maker shall cause all waste lime which has been taken out of any pit upon the premises where his trade is carried on to be forthwith deposited in suitable vessels or receptacles, or in a properly constructed cart or carriage which, when filled or loaded, shall be covered in such a manner as to prevent the emission of noxious or injurious effluvia from the contents thereof, and shall, with all reasonable dispatch, be removed from the premises.

8. Every glue-maker shall cause every floor or pavement upon the premises where his trade is carried on to be kept at all times in good

order and repair so as to prevent the absorption therein of any liquid filth or refuse, or any noxious or injurious matter which may fall or be deposited thereon.

He shall cause every part of the internal surface of the walls and the ceiling of any building used for the process of boiling, cooling, cutting, or washing to be thoroughly washed with hot lime-wash during the period between the and day of *March* in every year.

9. Every glue-maker shall adopt the best practicable means of rendering innocuous all gas or vapour emitted, during the process of boiling, from the contents of any pan upon the premises where his trade is carried on.

He shall, in every case, either cause the gas or vapour to be discharged into the external air in such a manner and at such a height as to admit of the diffusion of the gas or vapour without noxious or injurious effects, or shall cause the gas or vapour to pass directly from the pan through a fire or into a suitable condensing apparatus, or through a suitable condensing apparatus and then through a fire in such a manner as effectually to consume the gas or vapour, or to deprive the same of all noxious or injurious properties.

10. Every glue-maker shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

11. Every glue-maker shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

12. Every glue-maker who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority :

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

Byelaws with respect to the Trade of a Size-maker.

1. A size-maker shall not cause or suffer any moist materials which, by reason of decomposition, have become useless for the purpose of size-making to be kept for a longer time than may be necessary in any part of the premises where his trade is carried on.

2. Every size-maker shall cause all moist materials which have been received upon the premises where his trade is carried on, and which are not required for immediate use to be stored in such a manner and in such a situation as to prevent the emission of noxious or injurious effluvia therefrom.

He shall, where practicable, cause the materials to be dried before being deposited in that part of the premises which has been appropriated for the storage thereof.

In every case, where by reason of the state of the weather or for any other sufficient cause, it may be impracticable to dry the materials, he

shall cause the several pieces to be subjected to the action of a sufficient quantity of milk of lime, and to be closely stacked.

3. Every size-maker shall cause all scutch, residue, or refuse which has been removed from any boiling pan upon the premises where his trade is carried on, and which is not intended to be forthwith subjected to any further trade process upon the premises to be deposited, immediately after removal from the pan, in a suitable chamber or shed, and in such a manner as to prevent the emission of any noxious or injurious effluvia from the scutch, residue, or refuse so deposited; or to be placed, immediately after removal from the pan, in bags or sacks, casks or barrels, which, when filled, shall be closed and fastened or covered in such a manner as to prevent the emission of noxious or injurious effluvia from the contents thereof.

In every case, where the scutch, residue, or refuse has been deposited in a chamber or shed, he shall cause all the contents thereof to be removed from the premises within *forty-eight hours* after the deposit of the same in the chamber or shed.

4. Every size-maker shall, at the close of every working day, cause every floor or pavement upon the premises where his trade is carried on to be thoroughly swept.

He shall cause every floor or pavement elsewhere than in that part of the premises where the processes of drying and packing are carried on to be thoroughly washed once at least in *every week*.

5. Every size-maker shall, at the close of every working day, cause every fragment of size, or of any material used in size-making, which has fallen or been deposited upon any part of the premises where his trade is carried on to be collected and placed in a suitable receptacle.

6. Every size-maker shall cause the interior and exterior of every boiling pan, and of every tank, vat, trough, or other receptacle upon the premises where his trade is carried on to be thoroughly cleansed from time to time as often as may be necessary to prevent any accumulation of filth in or upon the pan, tank, vat, trough, or receptacle.

7. Every size-maker shall cause all waste lime which has been taken out of any pit upon the premises where his trade is carried on to be forthwith deposited in suitable vessels or receptacles, or in a properly constructed cart or carriage, which, when filled or loaded, shall be covered in such a manner as to prevent the emission of noxious or injurious effluvia from the contents thereof, and shall, with all reasonable dispatch, be removed from the premises.

8. Every size-maker shall cause every floor or pavement upon the premises where his trade is carried on to be kept at all times in good order and repair so as to prevent the absortion therein of any liquid filth or refuse, or any noxious or injurious matter which may fall or be deposited thereon.

He shall cause every part of the internal surface of the walls and the ceiling of any building used for the process of boiling, cooling, cutting, or packing to be thoroughly washed with hot lime-wash during the period between the and day of *March* in every year.

9. Every size-maker shall adopt the best practicable means of rendering innocuous all gas or vapour emitted, during the process of boiling, from the contents of any pan upon the premises where his trade is carried on.

He shall, in every case, either cause the gas or vapour to be discharged into the external air in such a manner and at such height as to admit of the diffusion of the gas or vapour without noxious or injurious effects, or shall cause the gas or vapour to pass directly from the pan

through a fire or into a suitable condensing apparatus, or through a suitable condensing apparatus and then through a fire in such a manner as effectually to consume the gas or vapour, or to deprive the same of all noxious or injurious properties.

10. Every size-maker shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

11. Every size-maker shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

12. Every size-maker who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of ; and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority:

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment, as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

Byelaws with respect to the Trade of a Gut-scraper.

1. Every gut-scraper shall cause all undried guts which have been received upon the premises where his trade is carried on, and which are not required for immediate use to be placed in suitable vessels or receptacles, properly constructed of galvanized iron or of some other non-absorbent material, and furnished with closely fitting covers.

He shall cause the several vessels or receptacles in which the guts have been placed, to be covered and to be kept covered until it becomes necessary to remove the contents for actual use.

2. Every gut-scraper shall, at frequent intervals during every working day, cause every floor or pavement upon the premises where his trade is carried on to be thoroughly swept and to be copiously sprinkled or washed with an effective deodorant powder or solution.

3. Every gut-scraper shall, at the close of every working day, cause every floor or pavement upon the premises where his trade is carried on to be thoroughly cleansed.

He shall, at the same time, cause all refuse fragments of gut, or other matter detached in the process of scraping, and all garbage, filth, or other offensive matter to be collected and placed in suitable vessels or receptacles, properly constructed of galvanized iron or of some other non-absorbent material, and furnished with closely fitting covers, and containing a sufficient quantity of a deodorant solution.

He shall cause the several vessels or receptacles, when filled, to be covered, and shall cause the vessels or receptacles with the contents thereof to be forthwith removed from the premises.

He shall also cause every vessel or receptacle, when not in actual use, to be kept thoroughly clean.

4. Every gut-scraper shall, at the close of every working day, cause every bench or table, every tub, vessel, or utensil, and every implement which has been in use during the day upon the premises where his trade is carried on or which is in a foul or offensive condition to be thoroughly cleansed with water containing a deodorant.

5. Every gut-scraper shall, at the close of every working day, cause all filth or refuse which has been splashed upon any part of the internal surface of any wall of any building upon the premises where his trade is carried on to be removed by scraping or by some other effectual means.

6. Every gut-scraper shall cause the ceiling and the internal surface of every wall above the floor or pavement of any building upon the premises where his trade is carried on to be thoroughly washed with hot lime-wash four times at least in *every year*, that is to say, at least once during the periods between the and day of *March*, the and day of *June*, the and day of *September*, and the and day of *December*, respectively.

7. Every gut-scraper shall cause every part of the internal surface of the walls of any building and every floor or pavement upon the premises where his trade is carried on to be kept at all times in good order and repair so as to prevent the absorption therein of any liquid filth or refuse, or any noxious or injurious matter which may be splashed or may fall or be deposited thereon.

8. Every gut-scraper shall cause every drain or means of drainage upon or in connexion with the premises where his trade is carried on to be maintained at all times in good order and efficient action.

9. Every gut-scraper shall, at all reasonable times, afford free access to every part of the premises where his trade is carried on to the medical officer of health, the inspector of nuisances, or the surveyor of the sanitary authority, or to any committee specially appointed by the sanitary authority in that behalf, for the purpose of inspecting the premises.

10. Every gut-scraper who shall offend against any of the foregoing byelaws shall be liable for every such offence to a penalty of , and in the case of a continuing offence to a further penalty of for each day after written notice of the offence from the sanitary authority:

Provided nevertheless that the justices or court before whom any complaint may be made or any proceedings may be taken in respect of any such offence may, if they think fit, adjudge the payment as a penalty, of any sum less than the full amount of the penalty imposed by this byelaw.

No. 15.

Provisional Orders.

Local Government Board, Whitehall, S.W.,
12th August 1882.

Sir,

I am directed by the Local Government Board to state that they deem it desirable to follow a course similar to that adopted by them for several years past, and to fix a day before which all applications for Provisional Orders under the Public Health Act, 1875, or the Artizans' and Labourers' Dwellings Improvement Act, 1875, must be made, if it is wished that the Order should be confirmed during the Session of 1883. They have accordingly determined that all such applications must be received by them not later than the 1*st of January* next, subject to this exception, viz.: That where the application is for an Order to put in force the compulsory powers of the Lands Clauses

Consolidation Acts, or to confirm an improvement scheme under the Artizans' and Labourers' Dwellings Improvement Act, and the advertisements were not published until November, the application may be received not later than the *15th of January*.

It should be borne in mind, however, that the dates above mentioned are only fixed as the latest at which applications for Provisional Orders can be received. It is not the intention of the Board to interpose any obstacle in the way of these applications being made at earlier periods. On the contrary, where any sanitary authority propose to apply for a Provisional Order, the Board would wish them to make their application as soon as they are in a position to furnish the requisite particulars.

It is particularly important that applications for Provisional Orders to alter Local Acts should be made at the earliest date practicable. The details of these Orders often require much consideration, and the Board are able to give more attention to them in the autumn than is possible during the earlier part of the year. It would prove a material assistance to the Board if all applications for Provisional Orders of this kind were sent in before the *15th of October*.

The Board direct me at the same time to refer to the provision in section 176 of the Public Health Act, 1875, which enables sanitary authorities to issue in the months of September and October, or of October and November, the advertisements and notices which are required before they can apply for a Provisional Order to enable them to obtain lands by compulsory purchase. It is very desirable that the sanitary authority should avail themselves of this power, if they propose to make an application under the section in question. The same observation applies to applications under the Artizans' and Labourers' Dwellings Improvement Act.

The Board have found that in some instances a misapprehension has prevailed as to the period within which the advertisements and notices prescribed by section 176 of the Public Health Act must be issued. The section provides that the advertisements shall be published during three successive weeks in the months of September, October, or November, and it is necessary that the three weeks in which the publication takes place should all be included in the same month, whichever of those above mentioned is selected for the purpose. Moreover, the notice to the owners, lessees, and occupiers of the lands which it is proposed to purchase, must in all cases be given in the month immediately following that in which the advertisements are published.

The Board have also found that in some cases the deposit of a plan of the proposed undertaking, which is required by subsection (2.) of section 176, has not been made until after the advertisement referred to in that enactment has been published. They are advised that the deposit should always be made at such time as to enable the plan to be seen at all reasonable hours at the prescribed place as soon as the advertisement is issued.

The Board may take this opportunity of observing, that, if the sanitary authority intend to apply for a Provisional Order to enable them to purchase lands compulsorily in connexion with proposed works of sewerage or water supply, some of which will lie outside their district, they will probably find it convenient to satisfy the requirements of sections 32 and 54 of the Public Health Act, when they are issuing the necessary advertisements in respect of the application for a Provisional Order. If this course is taken, it will have the effect of preventing the delay which is occasioned at a subsequent stage of the proceedings, in cases where, after the Provisional Order is confirmed, advertisements

and notices under the sections in question have to be issued before the works for which the land is required can be commenced. Section 53 also should be complied with, where it is intended to construct a reservoir to hold more than 100,000 gallons of water.

The requirements of the Board with regard to applications for Provisional Orders under the Public Health Act are set forth in some instructions which they have issued on the subject, a copy of which is enclosed for the information of the sanitary authority. Similar instructions have also been issued with regard to applications under the Artizans' and Labourers' Dwellings Improvement Act, and these can be obtained on application to the Board, in cases where they are required.

I am directed to add, that where an urban sanitary authority propose to apply for a Provisional Order for gas purposes under the Gas and Water Works Facilities Acts, the special regulations which have been issued by the Board under those Acts must be complied with. Copies of these regulations can be obtained on application to the Board.

I am, &c.
JOHN LAMBERT,
Secretary.

To the Clerk
to the Sanitary Authority.

No. 16.
(Inclosure to No. 15.)

INSTRUCTIONS AS TO APPLICATIONS TO THE LOCAL GOVERNMENT BOARD FOR PROVISIONAL ORDERS UNDER THE PUBLIC HEALTH ACT, 1875.

Application for Provisional Orders to put in force the Compulsory Powers of the Lands Clauses Consolidation Acts.

1. The application must be made by a petition under the seal of the sanitary authority, containing the particulars required by section 176 (3) of the Public Health Act, 1875. The lands proposed to be purchased should be specified in a schedule to the petition, which should correspond with the book of reference mentioned in Instruction 3.

2. The petition must be presented not later than the 1st January, if the advertisements of the proposal were published in September or October, and not later than the 15th January, if they were published in November.

3. The petition should be accompanied by a plan of the proposed undertaking, by a book of reference in duplicate, and by a statutory declaration showing that the requirements of section 176 of the Public Health Act, with respect to advertisements and notices, have been duly complied with. The declaration must be stamped with a half-crown stamp, and copies of the newspapers containing the advertisements, and also of the form of notice, should be annexed to it as exhibits. It should specify the manner in which the notices were served upon the owners, lessees, and occupiers, and, so far as relates to these notices, it should be made by the persons who served them. It is important that the service should be effected in one of the modes prescribed by

section 267 of the Act. The plan should be coloured so as to distinguish the land proposed to be actually purchased, and the several properties should be numbered so as to correspond with the schedule to the petition and the book of reference.

Where it is only intended to carry sewers or water mains through lands, such lands should not be included in the petition, as the sanitary authority are empowered by sections 16 and 54 of the Public Health Act to carry sewers or mains through lands without the need of a Provisional Order.

4. The Standing Orders of both Houses of Parliament require that, *at the same time* as the plan of the undertaking and the book of reference are deposited with the Board, duplicates thereof shall be deposited with the Clerk of the Parliaments and at the Private Bill Office, unless the deposit with the Board is made after the prorogation of Parliament and before the 30th November, in which case the deposit with the Clerk of the Parliaments, and at the Private Bill Office, must be made on the day last-mentioned.

In order that compliance with these requirements may be proved before the Examiners of Standing Orders, the Board should be furnished with an *affidavit*, stamped with a half-crown stamp, and sworn before a justice of the peace or a commissioner for taking affidavits, by the person by whom the deposits have been made.

5. The Board have been advised that two or more sanitary authorities cannot jointly petition for a Provisional Order to enable them to put in force the compulsory powers of the Lands Clauses Consolidation Acts. Either each sanitary authority must present a separate petition in respect of the particular lands which they require, or else the several sanitary authorities must combine under section 285 of the Public Health Act, 1875, for the purpose of carrying the proposed scheme into execution, and a petition must be presented by one of them with regard to all the land required. If this course is taken, an agreement under the section should be entered into before application is made for the Provisional Order.

Applications for Provisional Orders to alter the Areas of Sanitary Districts.

6. The application should be made by a resolution of the sanitary authority, a copy of which should be forwarded to the Board.

7. The application must be made not later than the 1st January, and it is very desirable it should be made before.

8. The application should be accompanied by (*a*) a statement giving the names of the sanitary authorities whose districts are affected by the proposal, and the grounds upon which the application is made, (*b*) a map showing the present and proposed boundaries of the districts affected, and (*c*) a description, without reference to a map, of the boundaries of the part proposed to be added or detached, or formed into a new district, as the case may be. Where part of a rural sanitary district is affected, the name of the contributory place should be given.

9. Where it is desired that the area of a sanitary district should be altered in which there is a Local Act in force, relating to the same subject matters as the Public Health Act, application should be made for an alteration of the Local Act at the same time that the application is sent in for an alteration of the sanitary district, if it is wished that the area to which the Local Act applies should be modified, and Instructions 10 and 12 should be complied with.

Applications for Provisional Orders to repeal, alter, or amend Local Acts.

10. The application should be made by a resolution of the sanitary authority, asking the Board in general terms to repeal, alter, or amend the Local Act, wholly or partially, as the case may require. A copy of the resolution should be forwarded to the Board.

11. The application must be made not later than the 1st January, and it is very desirable that it should be sent in before the 15th October.

12. The application should be accompanied by a copy of the Local Act, and by a statement showing the particular sections which it is proposed should be repealed, altered, or amended, and the precise alteration desired. The statement should also show the grounds upon which the application is made.

13. Where the effect of the proposed repeal or alteration of the Local Act will be to extend or diminish the area of a sanitary district, the particulars referred to in Instruction 8 should also be furnished.

N.B.—It is particularly requested that all petitions, statutory declarations, and other such documents may be written on foolscap paper of the usual size.

JOHN LAMBERT,
Secretary.

Local Government Board, Whitehall,
12th August 1882.

No. 17.

HOP-PICKERS.

Local Government Board, Whitehall, S.W.,
22nd August 1882.

SIR,

As the hop-picking season is now approaching, I am directed by the Local Government Board to state that they deem it desirable to draw the attention of the sanitary authority to the necessity of a supervision by them and their officers of the accommodation provided for the hop-pickers employed in their district, and the sanitary arrangements connected therewith.

The Board trust, therefore, that the sanitary authority will not fail to impress upon their officers the importance of giving special attention to these matters, and of frequently visiting the premises in which the hop-pickers are housed.

As regards those districts where byelaws relating to hop-pickers are in force, the Board rely upon the necessary measures being taken for securing a strict enforcement of their requirements.

I am, &c.
JOHN LAMBERT,
Secretary.

To
The Clerk to the
Sanitary Authority.

No. 18.

Relief to Wives of Men in the First Class Army Reserve.

Local Government Board, Whitehall, S.W.,
Sir, *30th August* 1882.

I am directed by the Local Government Board to state, for your information, the course which, in their opinion, Boards of Guardians should adopt in dealing with applications for relief from the wives of men in the First Class Army Reserve who have been required to join the colours.

I am directed to enclose the accompanying Memorandum, containing extracts from the Regulations of the War Office for the mobilization of the First Class Army Reserve for permanent service, and showing the contributions to be made by soldiers on the married roll when on foreign service.

I am directed to state that, with respect to the mode in which relief should be administered in such cases, it is within the discretion of the guardians to decide whether out-relief should be allowed, or whether the applicants should be required to enter the workhouse, as it will be seen, by reference to Exception 7 to Article 1 of the General Out-door Relief Prohibitory Order, that the wife or child of a soldier in the service of Her Majesty is exempt from the provision that relief to an able-bodied person shall be wholly in the workhouse.

It is scarcely necessary to state that, in dealing with these cases, the first question upon which the guardians have to satisfy themselves is whether the applicants are really destitute to such an extent as to require relief, and if their destitution is clearly established, the next question to be determined is the kind of relief which should be afforded.

With regard to the first question, it must be borne in mind that an allowance is made by the Government for the wives and children of the men of the First Class Army Reserve at the rate of 8*d.* a day for each woman and 2*d.* a day for each girl under 16 or boy under 14 years of age; and it is most important to note further that the allowance will be issued monthly in advance.

The cases, therefore, which are likely to arise will only be those of temporary distress; and, looking to the important point that the position of the applicants will contrast favourably with that of other persons who are left entirely without means of support, the Board cannot but think that, as a rule, an able-bodied woman, with the Government allowance and such assistance as her husband ought to provide from his pay and allowances, should have no difficulty in finding, if not immediately, at least within a reasonable period after her husband's departure, sufficient employment to enable her to maintain adequately herself and her children, if any.

With respect to the second question—viz., the kind of relief which should be given—the Board are of opinion that, where the applications are made for the first time, and the guardians are quite satisfied that some assistance is necessary, out-door relief may not improperly be granted for a short period, in order to enable the applicants to make such arrangements for their support as their altered circumstances may really require. When, however, a sufficient time has been allowed for this purpose, it appears to the Board that, in the interest of the applicants and of their families, no less than in that of the ratepayers, the ordinary principles which should regulate the administration of relief should be impartially applied. At the same time, it will be for the guardians to deal with each case according to the special circumstances attending it.

It is, of course, competent for the guardians to declare any relief given in these cases as relief by way of loan, and it will rest with them to decide to what extent this course shall be adopted.

I am, &c.

To JOHN LAMBERT,
The Local Government Board Inspector. *Secretary.*

No. 19.

(Inclosure to No. 18.)

MEMORANDUM.—EXTRACT FROM THE REGULATIONS FOR MOBILIZATION OF FIRST CLASS ARMY RESERVE FOR PERMANENT SERVICE.

27. A man of the First Class Army Reserve who, on reporting himself in pursuance of the notice to rejoin the colours, states that he is married, is required to make a declaration to this effect. The declaration is sent to the paymaster paying the depôt of the corps which the man is ordered to join.

28. The wives and families of the men of the First Class Army Reserve who rejoin the army for permanent service will not accompany the men, but will be granted separation allowances, at the rate of 8*d.* a day for the wife, and 2*d.* a day for each girl under 16 or boy under 14 years of age. The allowance will be issued from the date (inclusive) on which the man reported himself for service, and will be continued so long as he is detained on army service.

29. The allowance will be issued monthly in advance by the Paymaster paying the depôt of the corps with which the man is serving.

Contributions by Soldiers when on Foreign Service.

In addition to the separation allowance paid out of army funds, a soldier borne on the married establishment of his corps who, owing to foreign service, is separated from his wife and family, is required to contribute a portion of his pay towards their maintenance, viz.:—

When supplied with a field ration—

Sergeants—daily—8*d.* for wife,
$1\frac{1}{2}$*d.* for each child not above the age of 16 years.

Maximum not to exceed 1*s. a day, except with the soldier's consent.*

Rank and file—daily—4*d.* for wife,
1*d.* for each child not above the age of 16 years.

Maximum not to exceed 6*d. a day, except with the soldier's consent.*

When supplied with an ordinary bread and meat ration or rationed on board ship—

Sergeants—daily—4*d.* for wife,
$\frac{1}{2}$*d.* for each child not above the age of 16 years.

Maximum not to exceed 6*d. a day, except with the soldier's consent.*

Rank and file—daily—2*d.* for wife,
$\frac{1}{2}$*d.* for each child not above the age of 16 years.

Maximum not to exceed 3*d. a day, except with the soldier's consent.*

Note.—It should be observed that the stoppage of pay referred to in the latter part of this memorandum applies to all soldiers on the married roll when on foreign service, and *not specially* to men of the First Class Army Reserve who have been recalled to the colours.

No. 20.

Poor Law Legislation in the Session of 1882.

Local Government Board, Whitehall, S.W.,
31st August 1882.

Sir,

I am directed by the Local Government Board to state that during the present session three Acts of Parliament have been passed affecting the laws relating to the relief of the poor, viz., the Divided Parishes and Poor Law Amendment Act, 1882 ; the Poor Rate Assessment and Collection Act, 1869, Amendment Act, 1882; and the Casual Poor Act, 1882. The Board think it desirable to bring the chief provision of these statutes under the notice of the guardians.

The Divided Parishes and Poor Law Amendment Act, 1882.

The Act provides that any part of a parish detached from the rest of it and wholly surrounded by another parish shall, after the 25th March next, be amalgamated with the parish by which it is surrounded. This enactment is, however, subject to two exceptions. In the first place, it does not apply to any parish wholly or partly within the Metropolis, and in the next, if the population of the detached part exceeds 300 persons, application may be made to the Board to form it into a separate parish. It is necessary that any such application should be made in writing on or before the 1st December next. The application must be signed by one-tenth in number and rateable value of the ratepayers of the detached part, and it should be accompanied by a certificate from the overseers showing that this is the case. Moreover, it should state fully the grounds upon which it is thought desirable that a new parish should be formed, as under ordinary circumstances the Board do not consider that new parishes of small area and population should be constituted.

When an application of the kind referred to is made, the detached part to which it relates will remain in the same position as at present until the application has been disposed of, but with this exception every detached part to which the Act applies will from and after the 25th March next be amalgamated with the surrounding parish, in the same way precisely as if the amalgamation had been effected by an order of the Board under the Divided Parishes and Poor Law Amendment Act, 1876. A part thus added to a parish is to be deemed to be within the same county as the parish with which it is amalgamated, and any alteration of an area made by the Act will extend to and alter the constitution of the school districts affected, unless the Education Department otherwise direct. The term "county" includes a riding or other division having a separate court of quarter sessions, or for which a separate county treasurer can be appointed, so that it extends to the ridings of Yorkshire, the parts of Lincolnshire, and the divisions of Sussex.

It appears desirable to explain briefly the effect of the alteration of areas which will be made by the Act upon the administration of the highway law in the parishes concerned. The Board direct me to state, therefore, that where a detached part is added to a parish which separately maintains its own highways, or is entitled to return a separate waywarden to a highway board, it will become amalgamated with the parish for highway as well as for other purposes. Where, however, this is not the case, the Board may, by order, deal with the parish for highway purposes. Thus the Board will be enabled so make such an order wherever a detached part becomes amalgamated with a poor law

parish which is divided for highway purposes into townships, each with its separate surveyor or surveyors, as the parish would not be a place separately maintaining its own highways or entitled to return a separate waywarden to a highway board, and as regards highway purposes, would not be affected by alteration of areas made by the Act.

It should be added that, if two or more detached parts of parishes adjoin each other and are wholly surrounded by another parish, such parts will, subject to the exceptions before referred to, all become merged on the 25th March next in the parish by which they are surrounded. If any question arises as to whether part of a parish is detached, or is wholly surrounded by another parish, the Board are empowered to determine it.

In every case where a detached part of a parish is separated from or added to a parish, it will be necessary that steps should be taken for the revision of the valuation list of the parish affected, so that the revised list may come into force as early as possible after the 25th March next.

Although the chief object of the Act is to deal with detached parts of parishes which are entirely surrounded by other parishes, it effects some important alterations in the law as to other matters, as regards which experience had shown that amendment was desirable. Thus, a difficulty was found to exist where wards having been formed under the Public Health Act of 1872 or 1875 for the election of guardians, circumstances arose which rendered it expedient that the wards should be altered, as there was no provision enabling an alteration to be made. The requisite power is conferred by section 8 of the Act now under consideration.

Power has also been given to the Board to adjust liabilities where an asylum district formed under the Metropolitan Poor Act is altered, and to direct a separate rate to be made where this is required in connexion with any adjustment of liabilities under the Poor Law Acts. The law was previously defective as regards both these subjects.

As the guardians are aware, it has hitherto been necessary, before they could purchase land or borrow money, that the consent in writing of a majority of their body should be given. A similar condition has not been imposed in the case of other local authorities, and the necessity for complying with this requirement has often caused serious inconvenience and delay in giving effect to proposals which were well known to the guardians generally and fully approved by them. Section 12 of the Act now directs that it shall be sufficient if a resolution giving consent is passed at a meeting of the guardians, providing that 14 days notice of the meeting and of the business to be transacted at it has been given to each guardian.

Another important change in the law is effected by the repeal of so much of the Union and Parish Property Act, 1835, and of the Parish Property and Parish Debts Act, 1842, as required deeds and other instruments to be forwarded to the Board and to be approved and registered by them. The business connected with this approval and registration has imposed much trouble on both the Board and the guardians, and it appeared to the Board that as deeds executed by other local authorities or by guardians when acting as a rural sanitary authority were not required to be approved or registered by them, it was not necessary that this should be done when the documents were issued by guardians acting as a poor law authority. Section 14 accordingly provides that nothing in the Acts above referred to, or in the Poor Law Amendment Act, 1834, or in the Union Loans Act, 1869, or in the Acts amending those statutes, shall require the approval or registration

by the Board of any deed or instrument executed on or after the 18th August 1882, or of any lease or agreement for a lease made under the authority of any of these Acts. As the mortgages granted by the guardians in respect of money borrowed by them will no longer be registered by the Board, the duty of keeping a register of these securities has been imposed on the guardians by the Act. The form of the register and the regulations as to inspection are to be prescribed by the Board, and they will shortly issue an order dealing with this matter. It will, of course, be understood that after an order has been issued authorising the borrowing of money by guardians for poor law purposes, it will still be necessary that the Board's consent should be obtained to the mode and period of repayment; and that where property is sold under an order of the Board, their directions will still be required as to the appropriation of the sale produce.

Section 1 of the 25 & 26 Vict. c. 43., which empowers the guardians to send any poor child to a school certified by the Board, limits the amount which they can pay for its maintenance, clothing, and education whilst there to the sum which would have been charged for its maintenance if relieved in the workhouse during the same period. Considerable difficulty was experienced in deciding how this sum was to be determined, and the Poor Law Board took the opinion of eminent counsel upon the question. They were advised that the words "total "sum which would have been charged for the maintenance of such "child if relieved in the workhouse" must be construed with reference to the state of the law as it existed at the date of the Act in 1862, and that consequently they must be taken to mean the sum which would have been chargeable to the parish to which the child belonged in respect of its maintenance under section 26 of the Poor Law Amendment Act, 1834, excluding the charges which then fell upon the common fund of the union under the 28th section of that Act, such as rent of the workhouse, payments, and allowances to union officers, and other common expenses, but including a fair apportionment of the general charges of clothing and provisions, and such other expenses as were formerly chargeable to the individual parishes.

It will be seen, therefore, that the amount which the guardians could pay comprised nothing in respect of the education of the children, or of the salaries of the staff necessary for their care, and in practice it was in many instances found that the contribution which the guardians could make was altogether inadequate to the cost of supporting the children in the schools to which they were sent. On the one hand, therefore, the managers of the schools complained that the sums paid in respect of pauper children were insufficient, whilst on the other, the guardians were precluded from paying any larger amount, although they were often quite willing to do so. The limitation imposed on the guardians in this matters was felt to be the more unreasonable because there was no such limitation when they were required to send a child to a certified school by an order of the Board issued in pursuance of section 14 of the Poor Law Amendment Act, 1866. In such a case the amount to be paid is prescribed by the order, and it frequently exceeds that which could be paid if the child had been sent by the guardians voluntarily.

The difficulty is now removed, as section 13 of the new Act provides that the guardians may pay the reasonable expenses incurred in the maintenance, clothing, and education of any child sent by them to a certified school to an amount not exceeding such rate of payment as may be sanctioned by the Board for pauper children sent to the school. It will be observed that the Board's consent will not be required to the

sum to be paid for an individual child, but that the sum is not in any case to exceed the rate sanctioned by them in respect of the school. The Board will give consideration to any application which may be made to them by the managers of a certified school to sanction a rate of payment for their school; and the amount to be paid in any particular case will then be a matter for arrangement between the guardians and the managers, provided that it does not exceed the rate approved by the Board.

Among other enactments repealed by the Act is so much of section 18 of the Poor Law Amendment Act, 1834, as required copies of the orders of the Board to be stamped with their seal. This requirement only applied to poor law orders, and the Board have recently discontinued the sealing of copies of orders issued by them relating to other matters. The same course will now be adopted with regard to orders issued under the Poor Law Acts. The original orders will, of course, still be sealed, and the copies will be so marked as to show that this is the case.

The Poor Rate Assessment and Collection Act, 1869, *Amendment Act*, 1882.

Section 16 of the Poor Rate Assessment and Collection Act, 1869, provides that, if an occupier assessed in the rate when made ceases to occupy before the rate has been wholly discharged, the overseers shall enter in the rate book the name of the person succeeding him in the occupation of the premises, and the date when the occupation commences; and the section proceeds to declare that thenceforth the outgoing occupier shall remain liable to pay so much only of the rate as is proportionate to the time of his occupation within the period for which the rate was made. It was decided by the Exchequer Division of the High Court of Justice in the case of the Overseers of St. Werburgh *v.* Hutchinson, L. R. 5, Ex. D. 19; 49 L. J., M. C. 23, that this enactment only applied when the outgoing tenant was succeeded by another during the period for which the rate was made, and that consequently, if there was no incoming tenant, the outgoing occupier remained liable for the whole rate. Section 3 of the recent Act now provides that the outgoing occupier shall only be liable to pay so much of the rate as shall be proportionate to the time of his occupation, notwithstanding that he may not be succeeded in his occupation by an incoming tenant.

It was also lately decided in the case of the Queen *v.* Dyott and others, L. R. 9, Q. B. D. 47, that a poor rate which had not been published in the parish for which it was made by reason of there being no church or chapel to which the notice could be affixed was invalid. Section 4 of the Act removes this difficulty, and provided that in such a case the rate shall be deemed to have been duly published if, within fourteen days after it is made, notice of it has been affixed in some public and conspicuous place or situation in the parish. This section is retrospective, and applies to a rate made before or after the passing of the Act.

In connection with the recovery of the poor rate, the Bills of Sale Act (1878) Amendment Act, 1882, which comes into operation on the 1st of November next, contains incidentally a provision of considerable importance, to which reference may usefully be made. The provision is that in section 14, by which it is enacted that a bill of sale to which the Act applies shall be no protection in respect of personal chattels included in such bill of sale which but for such bill of sale would have been liable to distress under a warrant for the recovery of taxes and poor and other parochial rates.

The Casual Poor Act, 1882.

By this Act, which comes into operation from and immediately after the 31st December next, and which is to be read as one with the Pauper Inmates Discharge and Regulation Act, 1871, the law is made more stringent with respect to the detention of casual paupers. Under section 5 of the Act of 1871 a casual pauper could not discharge himself from a casual ward—

1. Before 11 o'clock in the morning on the day following his admission, nor before he had performed the work prescribed for him; and
2. If he had been admitted on more than two occasions during one month into any casual ward of the same union, before 9 o'clock in the morning of the third day after his admission.

This section is entirely repealed, section 4 of the recent Act being substituted for it, and under the new law a casual pauper will not be able to discharge himself from a casual ward—

1. Before 9 o'clock in the morning of the second day following his admission, nor before he has performed the work prescribed for him; and
2. If he has been admitted on more than one occasion during one month into the casual ward of the same union, before 9 o'clock in the morning of the fourth day after his admission.

At any time during that interval he may, as was the case under the previous law, be removed to the workhouse of the union (or in the Metropolis to any workhouse or any asylum provided under the Metropolitan Poor Act, 1867, for the reception and setting to work of the casual poor, to which the casual poor of the union can be sent), by any officer of the guardians or by a police constable, and be required to remain there for the remainder of the period of his detention.

It should be observed that the section merely provides that the pauper shall not be entitled to discharge himself before the times specified, and that it does not render it compulsory on the guardians to detain him during the periods referred to. The Board were empowered by section 6 of the Act of 1871 to make regulations respecting the discharge, as well as the admission, diet, and work of casual paupers, and this enactment, under which the order of 22nd November 1871 relating to casual paupers was issued, is still in force. Some modification of the order will probably be required, in consequence of the passing of the Act of this Session, and the Board will give attention to the matter.

Any question as to whether Sunday should be included in computing the number of days during which a casual pauper could be detained is set at rest by the present Act, which provides that it shall not be included.

The special provision in section 5 of the Act of 1871, to the effect that in determining the number of admissions of a casual pauper every casual ward in the Metropolis is to be deemed to be a casual ward of the same union, is re-enacted.

The Act further provides that if a person, for the purpose of obtaining relief, either for himself or any other person, wilfully gives a false name or makes a false statement to the guardians or their officers, he shall be deemed an idle and disorderly person within the meaning of section 3 of the Act 5 Geo. 4. c. 83. Hence it will be lawful for any justice of the peace to commit any such offender to the House of Correction with hard labour.

It will be observed that in order to bring a person within this provision it is not necessary that he should be a pauper in receipt of relief, or that he should succeed by the false statement in obtaining relief, or that the deception should be practised in order to obtain relief for himself.

The Legislature has passed this measure with a view of checking the increase of vagrancy, of which much complaint has been made in some parts of the country, and the Board trust that in administering the Act the guardians will use every effort to give effect to this important object.

I am, &c.
JOHN LAMBERT,
Secretary.

To
The Clerk to the Guardians.

No. 21.

THE DIVIDED PARISHES AND POOR LAW AMENDMENT ACT, 1882, AND THE POOR RATE ASSESSMENT AND COLLECTION ACT, 1869, AMENDMENT ACT, 1882.

Local Government Board, Whitehall, S.W.,
31st August 1882.

GENTLEMEN,

I AM directed by the Local Government Board to bring under your notice some of the provisions of the Divided Parishes and Poor Law Amendment Act, 1882, which has become law during the present session.

The Act provides that any part of a parish detached from the rest of it and wholly surrounded by another parish shall, after the 25th March next, be amalgamated with the parish by which it is surrounded. This enactment is, however, subject to two exceptions. In the first place, it does not apply to any parish wholly or partly within the Metropolis, and in the next, if the population of the detached part exceeds 300 persons, application may be made to the Board to form it into a separate parish. It is necessary that any such application should be made in writing on or before the 1st December next. The application must be signed by one-tenth in number and rateable value of the ratepayers of the detached part, and it should be accompanied by a certificate from the overseers showing that this is the case. Moreover, it should state fully the grounds upon which it is thought desirable that a new parish should be formed, as under ordinary circumstances the Board do not consider that new parishes of small area and population should be constituted.

When an application of the kind referred to is made, the detached part to which it relates will remain in the same position as at present until the application has been disposed of, but with this exception every detached part to which the Act applies will, from and after the 25th March next, be amalgamated with the surrounding parish, in the same way precisely as if the amalgamation had been effected by an order of the Board under the Divided Parishes and Poor Law Amendment Act, 1876. A part thus added to a parish is to be deemed to be within the same county as the parish with which it is amalgamated, and any alteration of an area made by the Act will extend to and alter the constitution of the school districts affected, unless the Education

Department otherwise direct. The term "county" includes a riding or other division having a separate court of quarter sessions, or for which a separate county treasurer may be appointed, so that it extends to the ridings of Yorkshire, the parts of Lincolnshire, and the divisions of Sussex.

It appears desirable to explain briefly the effect of the alteration of areas which will be made by the Act upon the administration of the highway law in the parishes concerned. The Board direct me to state, therefore, that where a detached part is added to a parish which separately maintains its own highways, or is entitled to return a separate waywarden to a highway board, it will become amalgamated with the parish for highway as well as for other purposes. Where, however, this is not the case, the Board may, by order, deal with the parish for highway purposes.

Thus the Board will be enabled to make such an order wherever a detached part becomes amalgamated with a poor law parish which is divided for highway purposes into townships, each with its separate surveyor or surveyors, as the parish would not be a place separately maintaining its own highways or entitled to return a separate waywarden to a highway board, and as regards highway purposes would not be affected by the alteration of areas made by the Act.

It should be added that, if two or more detached parts of parishes adjoin each other and are wholly surrounded by another parish, such parts will, subject to the exceptions above referred to, all become merged on the 25th March next in the parish by which they are surrounded, and that if any question arises as to whether part of a parish is detached, or is wholly surrounded by another parish, the Board are empowered to determine it.

In every case where a detached part of a parish is separated from or added to a parish, it will be necessary that steps should be taken for the revision of the valuation list of the parish affected, so that the revised list may come into force as early as possible after the 25th of March next.

It was enacted by section 2 of 20 Vict. c. 19. that under certain circumstances a person might be appointed an overseer for an extra-parochial place who was an inhabitant householder not of the place, but of some adjoining parish, and that he might be paid a salary subject to the Board's approval. An enactment in precisely similar terms, except that it applies to all parishes, and does not require the approval of the Board to the salary of the overseer, is contained in section 11 of the Poor Law Amendment Act, 1866. In these circumstances, and as extra-parochial places have all been parochialised, it appeared unnecessary that applications should still be made to the Board, as has been done in some recent instances, to approve of salaries under the former of the enactments above mentioned, or that the section itself should remain in the statute book. It has consequently been repealed.

The Board may take this opportunity of drawing your attention to the Poor Rate Assessment and Collection Act, 1869, Amendment Act, 1882 (45 & 46 Vict. c. 20.), which has also received the Royal Assent during this Session. Section 16 of the Poor Rate Assessment and Collection Act, 1869, provides that, if an occupier, assessed in the rate when made, ceases to occupy before the rate has been wholly discharged, the overseers shall enter in the rate book the name of the person succeeding him in the occupation of the premises, and the date when the occupation commences; and the section proceeds to declare that thenceforth the outgoing occupier shall remain liable to pay so much only of the rate as is proportionate to the time of his occupation within

the period for which the rate was made. It was decided by the Exchequer Division of the High Court of Justice in the case of the Overseers of St. Werburgh *v.* Hutchinson, L. R. 5, Ex. D. 19; 49 L. J., M. C. 23, that this enactment only applied when the outgoing tenant was succeeded by another during the period for which the rate was made, and that consequently, if there was no incoming tenant, the outgoing occupier remained liable for the whole rate. Section 3 of the recent Act now provides that the outgoing occupier shall only be liable to pay so much of the rate as is proportionate to the time of his occupation, notwithstanding that he may not be succeeded in his occupation by an incoming tenant.

It was also lately decided in the case of The Queen *v.* Dyott and others, L. R. 9, Q. B. D. 47, that a poor rate which had not been published in the parish for which it was made by reason of there being no church or chapel to which the notice could be affixed was invalid. Section 4 of the Act lately passed removes this difficulty, and provides that in such a case the rate shall be deemed to have been duly published if, within fourteen days after it is made, notice of it has been affixed in some public and conspicuous place or situation in the parish. This section is retrospective, and applies to a rate made before or after the passing of the Act.

In connexion with the recovery of the poor rate the Bills of Sale Act, 1878, Amendment Act, 1882, which comes into operation on the 1st of November next, contains incidentally a provision of considerable importance to which reference may be usefully made. The provision is that in section 14, by which it is enacted that a bill of sale to which the Act applies shall be no protection in respect of personal chattels included in such bill of sale which, but for such bill of sale, would have been liable to distress under a warrant for the recovery of taxes and poor and other parochial rates.

I am, &c.
JOHN LAMBERT,
Secretary.

To the Overseers of the Poor.

No. 22.

AUDITORS' REPORTS.

Local Government Board, Whitehall, S.W.,
12th September 1882.

SIR,

I AM directed by the Local Government Board to state that, in dealing with the numerous reports which they receive from the district auditors, of irregularities in the books of parochial and other officers arising from carelessness, inadvertence, or misapprehension of the regulations, the Board have frequently observed from the subsequent correspondence that the matter in question was explained at the time of the audit, and in many instances it would appear that the auditor gave such advice and directions as would, if duly acted upon, prevent a repetition of the error complained of. That the auditors should in this manner direct the attention of the officers concerned to defects which they may have to report to the Board, in cases where no suspicion arises of fraud or malpractices, and should endeavour by their advice and directions to bring about a more efficient performance of the public service is in strict conformity with the general tenor of the Board's instructions; and the Board believe, for the reasons above stated, that

such action on the part of the auditor in many instances fully meets the circumstances of the case.

With the view, therefore, of avoiding needless correspondence, the Board will be glad if the auditors will in future state in their reports whenever a specific defect or irregularity has been so explained and so dealt with at the time of the audit as, in the opinion of the auditor, to render a direct communication from the Board to the officer unnecessary.

I am, &c.
JOHN LAMBERT,
Secretary.

To
District Auditor.

No. 23.

PUBLIC WORKS LOANS ACT, 1875 (SECTION 13).

Local Government Board, Whitehall, S.W.,
SIR, *6th November* 1882.

I AM directed by the Local Government Board to advert to the 13th section of the Public Works Loans Act, 1875 (38 & 39 Vict. c. 89.), which rendered it necessary that every local authority intending to borrow from the Public Works Loan Commissioners in any particular financial year, should send to the Commissioners, on or before the previous 31st December, a statement of the new loans or instalments of loans already granted which the authority would probably apply to borrow from them during the period referred to.

It has been the practice of the Board annually to call the attention of sanitary authorities to this enactment in order that its requirements might be borne in mind by any authority proposing to borrow from the Commissioners. They deem it desirable, therefore, now to state that by section 9 of the Public Works Loans Act, 1882, (45 & 46 Vict. c. 62.), section 13 of the Act of 1875 is entirely repealed, so that in future it will not be requisite that the notice contemplated by it should be given to the Commissioners.

I am, &c.
JOHN LAMBERT,
Secretary,

The Clerk to the
Sanitary Authority,

No. 24.

THE ARTIZANS DWELLINGS ACT, 1882.
(45 & 46 Vict. c. 54.)

Local Government Board, Whitehall, S.W.,
SIR, *10th November* 1882.

I AM directed by the Local Government Board to draw the attention of the urban sanitary authority to Part I. of the Artizans Dwellings Act, 1882, which amends the Artizans and Labourers Dwellings Improvement Acts, 1875 and 1879.

The sanitary authority are aware that it has hitherto been necessary, where an improvement scheme has been made under the Act of 1875, that it should provide for the accommodation of at least as many persons of the working class as might be displaced in the area with respect to which the scheme was proposed. The Act of 1875 also required that this accommodation should be afforded in suitable dwellings, which, unless there were special reasons to the contrary, were to be situate within the limits of the same area, or in its vicinity; but by section 4 of the Act of 1879, it was made sufficient if equally convenient accommodation was provided at some other place than within the area comprised in the scheme or its immediate vicinity.

It has, however, been found that outside the Metropolis it is only necessary in exceptional instances that arrangements should be made by an improvement scheme for the accommodation of the persons displaced, and accordingly under section 3 of the Act of the present Session, whilst it is still requisite that the improvement scheme should make provision of the kind referred to where the Board require it, on the report of the inspector conducting the local inquiry held before the scheme can be confirmed, yet, in the absence of any such requirement, it is not obligatory on the sanitary authority to make such provision in the scheme.

Section 4 of the recent Act also amends section 19 of the Act of 1875, by declaring that additions to the property to be purchased under a scheme, or improvements of it, shall not be taken into account in estimating its value, if they are made after the publication of the advertisement required by section 6 of the Act of 1875, stating that a scheme has been made, unless they were necessary for the maintenance of the property in a proper state of repair. The section further directs that if any interest in the property is acquired after the publication of the advertisement, a separate estimate shall not be made of it so as to increase the amount of compensation to be paid. Moreover, the words, "and all circumstances affecting such value," which occur in section 19 of the Act of 1875 are repealed, so that these circumstances will not in future be taken into account by the arbitrator in determining the value of property for the purposes of the Act.

The only other provision to which the Board think it needful to refer is that contained in section 5 of the Act, by which Articles 5 to 13, both inclusive, of the schedule to the Act of 1875 are repealed, and the rules contained in the schedule to the Act of 1882 are substituted for them. The effect of the new regulations is to simplify the procedure for determining the compensation to be paid for lands acquired under the Act of 1875. The most important of the alterations made are:—

1. The abolition of the provisional award of the arbitrator;

2. The increase from 500*l.* to 1,000*l.* of the amount which the compensation must exceed to enable a person to appeal to a jury against the amount awarded; and

3. The requirement that the costs, charges, and expenses payable by a sanitary authority under Article 28 of the schedule to the Act of 1875, shall be certified by the Board.

I am directed to add that the provisions above referred to are founded on the report of a select committee of the House of Commons; and, as appears from that report, they are intended to diminish the cost of carrying out schemes under the Act of 1875. The Board believe they will be found to have this effect; and as many sanitary authorities have been deterred from making schemes by an apprehension of the expense which would be involved, the Board trust that they will now find this objection removed, and that if they have not already improved the

unhealthy areas in their districts, they will no longer hesitate to do so, and thus give effect to the object of the Legislature.

I am, &c.

JOHN LAMBERT,

Secretary.

The Clerk to the Urban Sanitary Authority.

No. 25.

THE ARTIZANS DWELLINGS ACT, 1882.

(45 & 46 Vict. c. 54.)

Local Government Board, Whitehall, S.W.,

11th November 1882.

SIR,

I AM directed by the Local Government Board to draw the attention of the guardians to the power conferred upon them by section 11 of the Artizans Dwellings Act, 1882.

Under that section, where an officer of health, in pursuance of the Artizans and Labourers Dwellings Act, 1868, has reported any premises to the local authority as unfit for human habitation, or where, in pursuance of Part II. of the Act of 1882, he has reported that the pulling down of an obstructive building would be expedient, the Board of Guardians in whose union or parish the premises or buildings are situate, or the owner of any property in the neighbourhood of them, may complain to the Metropolitan Board of Works that the local authority have failed to put in force the provisions of the Artizans Dwellings Acts, 1868 to 1882, in respect of the premises or buildings in question. The Metropolitan Board of Works may then, if they think it expedient to do so, proceed under section 12 of the Artizans and Labourers Dwellings Act (1868) Amendment Act, 1879, which makes provision for the enforcement of the Act by the Metropolitan Board of Works in cases where the local authority have failed to enforce it.

It should be stated that the Acts of 1868 and 1879, and Part II. of the Act of 1882, are to be read together as one Act, and that by section 3 of the Act of 1868, the term "officer of health" is defined as including a medical officer of health, sanitary inspector, or any statutory officer performing the duties which a medical officer or sanitary inspector performs under any Act of Parliament, and that the local authorities under the Statutes above referred to are in the Metropolis and outside the City of London, the vestries and district boards under the Metropolis Local Management Acts. Moreover, the expression an "obstructive building" in section 11 of the Act of 1882, means a building which, although not in itself unfit for human habitation, is so situate that, by reason of its proximity to other buildings, or its contact with them, it stops ventilation, or otherwise conduces to make the other buildings in a condition unfit for human habitation, or else prevents proper measures from being carried into effect for remedying the evils complained of in respect of the other buildings. See section 8 (1) of the Act.

The Act of 1882 is founded upon a report of a Select Committee of the House of Commons, and it appears from that report that the object of section 11 was to afford means for bringing under the notice of the Metropolitan Board of Works, cases in which it is desirable that they should enforce the execution of the Artizans Dwellings Acts. It is scarcely necessary to point out how desirable it is that the dwellings of the poorer classes in the Metropolis should be improved, or how much such improvements would tend to prevent pauperism, which is often

the result of disease caused by insanitary dwellings. The Board trust, therefore, that the Guardians will avail themselves of the power conferred upon them by the recent Statute whenever it can properly be exercised.

I am, &c.
JOHN LAMBERT,
Secretary.

The Clerk to the Guardians
(Metropolis.)

No. 26.

GENERAL ORDER.—PRESCRIBING REGISTER OF SECURITIES UNDER 45 & 46 VICT. C. 58. S. 14.

To the Guardians of the Poor of the several Unions in England and Wales;—

To the boards of management of the several district schools formed under the Poor Law Amendment Act, 1844, and the Acts amending the same;—

To the boards of management of the several asylum districts formed under the Metropolitan Poor Act, 1867;—

And to all others whom it may concern.

WHEREAS by section 14 of the Divided Parishes and Poor Law Amendment Act, 1882, herein-after referred to as "the Act of 1882," it is enacted as follows:—

"The following enactments are hereby repealed, viz."—

* * * * * *

"So much of section 6 of the Union and Parish Property "Act, 1835, and of the schedule to that Act, and so much of "section 6 of the Parish Property and Parish Debts Act, 1842, "as relate to the transmission to the Poor Law Commissioners, "and the approval, sealing, and registration by such Com- "missioners of deeds or other instruments, except as regards "deeds or instruments executed prior to the date of this Act; "and nothing in the said Acts, or in the Poor Law Amend- "ment Act, 1834, or in the Union Loans Act, 1869, or the "Acts amending or extending those Acts respectively, shall "be deemed to require the approval or registration by the "Local Government Board of any such deed or instrument as "aforesaid, or of any lease or agreement for lease made or "entered into under the authority of those Acts or any of "them."

"Provided that the guardians or managers, as the case may be, "shall keep a register of the securities in respect of all sums "borrowed by them, in such form and subject to such "regulations as to inspection or otherwise as the Local "Government Board may from time to time prescribe."

NOW THEREFORE, We, the Local Government Board, in pursuance of the powers given to us by the Statutes in that behalf, hereby order that until we otherwise direct, the following regulations shall be in force, namely:—

Art. I.—The register of securities required by the above-cited enactment to be kept shall be in the form prescribed in the schedule to this Order.

Art. II.—With respect to securities executed by the guardians or managers after the passing of the Act of 1882, it shall be the duty of the clerk to make the entries required in columns 1 to 13, both inclusive, of the said register, and to authenticate such entries by placing his signature in column 14 of the said register. Such entries shall be made and authenticated as aforesaid in the case of every security so executed before the date of this order, as early as practicable; and in the case of every security so executed on or after the date of this order, after the same has been executed and before it is delivered to the lender.

Art. III.—With respect to every transfer of any security, which shall have been or shall be executed by the guardians or managers, as the case may be, after the passing of the Act of 1882, it shall be the duty of the clerk, within seven days after the same shall be produced to him by or on behalf of the transferee, to make the entries required in columns 16, 17, and 18 of the said register, and to authenticate such entries by placing his signature in column 19 of the said register.

Art. IV.—At the meeting of the guardians or managers, as the case may be, held next after any entries required to be made under Articles II. and III. of this order have been duly made and authenticated as aforeraid, it shall be the duty of the clerk to submit the said register to the guardians or managers, and the chairman shall at such meeting place his signature, in the case of securities executed by the guardians or managers, in column 15 of the said register, and in the case of transfers, in column 20 of the said register.

Art. V.—When the final instalment due on any security included in the said register has been paid, it shall be the duty of the clerk to enter in column 21 of the said register the date of the payment of such final instalment, and to place his signature at the foot of such entry.

Art. VI.—No notice of any trust expressed, implied, or constructive, in relation to any security, shall be entered in the said register.

Art. VII.—The said register shall remain in the custody of the clerk, and shall be produced by him to the district auditor at every audit.

Art. VIII.—The clerk shall allow the said register to be open at all reasonable times to the inspection of any guardian or manager, as the case may be, and of any other person, and any such person may make copies of or extracts from the entries in the register in relation to any security or transfer included therein without fee or reward.

Art. IX.—In this Order—

The term "union" means a union of parishes under a general or Local Act, with a separate Board of Guardians, and includes a parish or place for which there is a separate Board of Guardians;

The term "guardians" means guardians appointed under the Poor Law Amendment Act, 1834, and the Acts amending the same, and includes guardians or any other body of persons performing under any Local Act the like functions as guardians under the Poor Law Amendment Act, 1834.

The term "managers" means members of boards of management of district schools formed under the Poor Law Amendment Act, 1844, and amending Acts, or members of boards of management of asylum districts formed under the Metropolitan Poor Act, 1867.

The term "clerk" means the clerk to the guardians or the clerk to the managers, as the case may be.

SCHEDULE.

REGISTER OF

(45 & 46 Vict.

_____ UNION, PARISH, SCHOOL DISTRICT, OR ASYLUM DISTRICT.

No. of Security.	Date of Security.	Amount borrowed. (*a*)	Date of Order of Local Government Board authorising the Loan.	Purpose for which the Loan was obtained.	Period for which the Loan was authorised.	Rate of interest.	Mode of repayment. (*b*)	Amount of each equal annual or half-yearly Instalment of principal, or of principal and interest combined.	Date or dates in each Year when Instalment becomes payable.	Date when final Instalment becomes payable.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
		£						£ *s.* *d.*		

(*a*.) If an Order of the Local Government Board authorise Loans for different purposes, the amount may be secured in one

(*b*.) If the Loan be repayable by equal instalments of principal, with

If the Loan be repayable by equal instalments of principal

SCHEDULE.

SECURITIES.

c. 58. s. 14.)

Name of Lender.	Residence and description of Lender.	Signature of Clerk and date of Signature.	Signature of Chairman and date of Signature.	If Security transferred.					When Loan repaid, date of final payment.
				Date of Transfer.	Name of Transferee.	Residence and description of Transferee.	Signature of Clerk and date of Signature.	Signature of Chairman and date of Signature.	
12.	13.	14.	15.	16.	17.	18.	19.	20.	21.

authorised for each purpose must be separately stated, although the repayment of the several sums and the same deed.
interest on the unpaid balance of principal, enter the words "Mode 1."
and interest combined, enter the words "Mode 2."

Given under the Seal of Office of the Local Government Board, this Seventh day of December, in the year one thousand eight hundred and eighty-two.

(L.S.) J. G. DODSON, *President.*

HUGH OWEN, *Assistant Secretary.*

Date of publication in the London Gazette, 8th December 1882.

No. 27.

PERIODICAL RETURNS OF SICKNESS IN METROPOLITAN PAUPER SCHOOLS.

Local Government Board, Whitehall, S.W.,
9th December 1882.

SIR,

I AM directed by the Local Government Board to advert to their circular letter, dated the 25th of August 1876, enclosing the form of the fortnightly return to be forwarded to the Board in respect of the various kinds of sickness prevalent in the several Metropolitan pauper schools.

It has been found necessary to make certain alterations in this return, with the view of including in it the deaths occurring in the period to which it refers, and also such cases of infectious disease as may have been removed from the school before the termination of the period. The Board have accordingly prepared the enclosed form of return, which they request that the_____will be good enough to substitute for the one which accompanied the circular letter above mentioned.

The Board, at the same time, direct me to state that they have frequently experienced inconvenience in consequence of these returns not having been forwarded to them with regularity. As this may be due to the absence of any specified day for the date of the returns, the Board, with the view of securing uniformity in future, will be glad if the_____will instruct the medical officer to prepare the returns on the first and third Saturdays respectively, in each month, and to forward them to you in time to enable you to transmit them to this office within three days from the specified date.

The returns should be addressed and endorsed as shown on the accompanying forms.

I am, &c.

EDWD. SUTTON,
Assistant Secretary.

To
The Clerk to the

No. 28.

(Inclosure to No. 27.)

Periodical Returns of Sickness in Metropolitan Pauper Schools.

FORM OF RETURN.

_____ Union, or Parish, or District.

A Return to be made to the Local Government Board of the sickness existing in the school at _____ on the first and third Saturdays respectively in each month, in accordance with the Board's circular letter of the 9th December 1882.

Return for Saturday the _____ day of _____ 188__.

	Boys.	Girls.	Infants (under 7).	Total.
Number of children under medical treatment in infirmary - - -				
Ditto ditto but not in infirmary - - -				
Total - - -				

Detailed particulars of certain cases included in above total.

	Cases of the under-mentioned ailments which have occurred since previous return.				Cases of the under-mentioned ailments remaining under treatment.			
	Boys.	Girls.	Infants (under 7).	Total.	Boys.	Girls.	Infants (under 7).	Total.
Ophthalmia { Number under treatment in infirmary - - -								
Ophthalmia { Ditto not in infirmary - -								
Ringworm - - - - - - - -								
Scabies - - - - - - - -								
Other Skin affections (stating the kind) _____ _____ _____								
Whooping-cough - -								
Measles - - - -								
Scarlet fever - - -								
Enteric-fever - - -								
Other fevers - - - (specifying them.) _____ _____ _____								
Small-pox - - - -								
Chicken-pox - - -								

DEATHS SINCE PREVIOUS RETURN.

Name.	Age.	Cause.	Remarks.

_____ *Medical Officer.* Date _____

_____ *Clerk to the Managers or Guardians.* Date _____

Note.—This return should be prepared on Saturday, and transmitted to the Clerk to the Guardians or Managers, so that it may reach the Local Government Board within three days.

No. 29.

OFFICERS' ENTERTAINMENTS.

Local Government Board, Whitehall, S.W.,
SIR, *15th December* 1882.

I AM directed by the Local Government Board to state that their attention has been drawn to the fact that, at some of the Metropolitan pauper infirmaries and asylums for the sick, it is the practice, at certain seasons of the year, to permit entertainments to which friends of the officers are invited, and at which dancing and music are allowed.

These establishments being expressly provided for the treatment of the sick poor, and being occupied by patients suffering from every variety of disease (on many of whom festivities carried on in the same or in an adjoining building might have a very prejudicial effect), appear to the Board to be specially inappropriate as places for entertainment of the kind referred to.

The Board do not doubt that the guardians and managers, on their attention being drawn to the subject, will concur with them in the view that music and dancing should not be permitted in infirmaries and asylums for the sick, and the Board trust that, if in any instance they have taken place, such directions will be given to the officers as will serve to prevent their recurrence.

I am, &c.
To HUGH OWEN,
The Clerk to the *Secretary.*

No. 30.

CASUAL POOR ACT, 1882.

Local Government Board, Whitehall, S.W.,
SIR, *18th December* 1882.

I AM directed by the Local Government Board to advert to their circular letter of the 31st of August last, in which they brought under the attention of the guardians the provisions of the Casual Poor Act, 1882, which comes into operation on the 1st January next.

By that Act the provision in the Pauper Inmates Discharge and Regulation Act, 1871, as to "the discharge of and detention of casual paupers" is repealed, and with the view of checking the increase of vagrancy a clause is substituted extending the time for which a casual pauper may be detained.

The Act referred to, which is to be construed as one with the Pauper Inmates Discharge and Regulation Act, 1871, has rendered it necessary for the Board to modify their General Order of the 22nd November 1871, and the Board have accordingly rescinded that Order, and issued an Order adapted to the new statutory provisions. They have also availed themselves of this opportunity of making certain amendments in the regulations with regard to casual paupers which appear to them to be desirable.

The Board enclose six copies of the Order for the use of the guardians and the officers concerned. The Order will take effect at the same time as the new Act, viz., on the 1st January next.

As regards the detention of casual paupers, it will be observed that under section 4 of the Act a casual pauper will "not be entitled" to discharge himself from a casual ward until the time therein mentioned, and the Board by their Order have provided that a casual pauper "shall not be allowed" to discharge himself at an earlier period than that at which he is entitled to discharge himself under that section. Provisions similar to those in the previous Order have, however, been introduced so as to admit of the discharge of any class or classes of casual paupers before the expiration of the respective periods specified in the section when the guardians so direct. When also, in the opinion of the master of the workhouse or the superintendent of the casual ward, there are special circumstances that require that a casual pauper should be discharged before the expiration of the specified period, he may be discharged accordingly, the facts of the case being reported to the guardians at their next meeting.

With respect to the new regulations, it may be convenient to draw attention to some of the more important alterations which are made by the Order.

By Article 4 the time for admission to a casual ward is fixed at two hours earlier than was the case under the former Order, viz., four o'clock in the afternoon (instead of six) during the months between October and March, and six o'clock in the afternoon (instead of eight) during the months between April and September. The Board hope that this alteration in the hours of admission will tend to prevent the evils arising from the congregating at the door of the casual ward of a number of casual paupers waiting for admission.

Article 4 further provides that the order for admission to a casual ward shall be available only "on the day on which it was issued," but the Board think it right to observe that if an order is granted at so late an hour at night that the casual pauper is unable to present it at the casual ward until after midnight, this would not in itself be a sufficient ground for refusing admission. It would, under such circumstances, be the duty of the master of the workhouse, or, during his absence or inability to act, of the matron or the superintendent of the casual ward, to admit the pauper, if the case appears to be one of sudden or urgent necessity. *See* Article 3 (1).

Article 8, which prescribes the form of admission and discharge book, contains an additional provision under which the guardians will be enabled to require the master of the workhouse or the superintendent of the casual ward to enter in the book such particulars as the guardians may deem expedient besides those indicated in the form. The form of book has also been altered to meet the cases of casual paupers who are detained for the full period authorised by the Act.

The regulations as to the tasks of work for male casual paupers have also been altered in several particulars. The maximum quantity of stone which the guardians may require to be broken by a male casual pauper who remains for one night only, has been increased from three to four cwt., and the maximum quantity in the case of a male casual pauper detained for more than one night, for each day of detention, has been increased from 10 to 13 cwt. This alteration has been made in consequence of the comparatively soft character of the stone which, in some localities, is used for the task of work. It is further provided that the stone shall be broken to such a size as the guardians, having regard to the nature of the stone, may prescribe.

The following alternative tasks of work are also prescribed :—In the case of male casual paupers who remain for one night only, three hours' work in digging, or pumping, or cutting wood, or grinding corn; and

in the case of casual paupers who are detained for more than one night, nine hours' work of the same character for each entire day of detention.

It will be observed from the third proviso to Article 11 that any task of work which at the date when the Order takes effect had been approved by the Board, in pursuance of the Order of the 22nd November 1871, will remain in force until the guardians pass a resolution revoking it.

It is, however, to be borne in mind, with reference to the several tasks of work, that by Article 11 it is provided that a person shall not be required to perform the whole or any part of such work, if it appears that the same is not suited to his age, strength, or capacity.

By section 7 of the Pauper Inmates Discharge and Regulation Act a pauper, whether an inmate of a casual ward or workhouse, who refuses or neglects to observe the regulations prescribed, is to be deemed an idle and disorderly person within the meaning of section 3 of 5 Geo. 4. c. 83., and the Board have deemed it desirable in Article 12 to prescribe additional regulations as to the conduct of casual paupers.

Instances have occurred showing the necessity for ready means of communication being provided between the inmates of the casual ward and the person having charge of the ward, and an express requirement that such provision shall be made is introduced in Article 14.

If the guardians have not already done so, it will be necessary for them to consider what arrangements can most conveniently be made for the accommodation by day of the casual paupers who are detained under the Act, and the Board direct me to state that, if the guardians desire it, the inspector of the district will be willing to confer with them on the subject.

The Board feel assured that they may rely on the co-operation of the guardians in giving effect to the powers conferred on them by the Act, and in enforcing the regulations which the Board have issued.

I am, &c.

To HUGH OWEN,

The Clerk to the Guardians. *Secretary.*

No. 31.

(Inclosure to No. 30.)

GENERAL ORDER.—REGULATIONS WITH RESPECT TO CASUAL PAUPERS.

To the Guardians of the Poor of the several Unions in England and Wales for the time being;—

And to all others whom it may concern.

WHEREAS by a General Order dated the 22nd day of November 1871 the Local Government Board, in pursuance of section 6 of the "Pauper Inmates Discharge and Regulation Act, 1871," prescribed regulations with reference to casual paupers:

And whereas the said Act has been amended by the "Casual Poor Act, 1882," and it is expedient that the said Order should be rescinded to the extent herein-after specified, and that other regulations should be substituted for those contained in that Order:

NOW THEREFORE, We, the Local Government Board, in pursuance of the powers given to us by the several Statutes in that behalf, hereby Order as follows:

Art. 1.—The said Order dated the 22nd day of November 1871, shall be rescinded on the 31st day of December 1882, except so far as that Order rescinded other Orders.

Art. 2.—The following regulations shall take effect on and after the 1st day of January 1883 with regard to the several unions in England and Wales for the time being.

Admission.

Art. 3.—A casual pauper shall not be admitted into any casual ward except upon an Order signed either—

By a relieving officer or an assistant relieving officer ;

Or, in cases of sudden and urgent necessity, by an overseer.

Provided as follows :

1. The master of the workhouse (or, during his absence or inability to act, the matron) or the superintendent of the casual ward shall admit any casual pauper without an order, where the case appears to be one of sudden or urgent necessity.
2. The master or matron of any workhouse or the superintendent of any casual ward in the metropolis shall admit without an order any person brought to the casual ward by a constable, in pursuance of section 4 of the "Metropolitan Houseless Poor Act, 1865," if there be room for him in such ward.
3. Where a person is refused admission to a casual ward, a record of the name of the applicant and of the circumstances under which he was refused admission shall be entered by the master, matron, or superintendent in a book, and laid before the guardians at their next meeting.

Art. 4.—The following regulations, subject, however, as regards the Metropolis, to the provisions of sections 4 and 5 of the "Metropolitan Houseless Poor Act, 1865," shall be observed with respect to orders of admission :—

1. The order shall, in addition to any other particulars which may be required, show the hour and place at which it was given :
2. The order shall be available only on the day on which it was issued :
3. The order shall not be available for admission earlier than four o'clock in the afternoon during the months between October and March, both inclusive, or earlier than six o'clock in the afternoon during the months between April and September, both inclusive, nor unless it is presented within a reasonable time after it has been obtained, except where at the time of the presentation of the order, the master or matron of the workhouse or the superintendent of the casual ward may consider the case to be one of sudden or urgent necessity.

Art. 5.—Every casual pauper shall immediately upon admission be searched, in the case of a male, by or under the inspection of the master or other male officer, and in the case of a female, by or under the inspection of the matron or other female officer, and all articles which may be found upon the person of such pauper shall be taken away, and (except as regards any money which may be dealt with in the manner prescribed by section 10 of the "Poor Law Amendment Act, 1848,") shall be restored to him at the time of his discharge.

Art. 6. Every casual pauper shall, as soon as practicable after his admission, be cleansed in a bath with water of suitable temperature : provided that this regulation shall not be enforced if, on account of the

state of health of the pauper or other circumstances, there is reason to believe that the use of the bath would be injurious.

Art. 7.—The clothing worn by a casual pauper shall, after his admission, be taken from him, and if requisite be dried or disinfected, and such garment or garments as the guardians may deem necessary shall be supplied to him for the night, his own clothes being returned to him in the morning.

Art. 8.—The master of the workhouse or the superintendent of the casual ward shall duly keep, or cause to be kept, a book containing the particulars set forth in the form in Schedule A. annexed hereto, and such other particulars as may be required by the guardians; and such book shall be laid before the guardians at such times as they may appoint, and shall be submitted to the district auditor at the usual audits, and at other audits when required by him.

Discharge.

Art. 9.—Whereas by section 4 of the "Casual Poor Act, 1882," it is enacted that—

"A casual pauper shall not be entitled to discharge himself from a casual ward before nine o'clock in the morning of the second day following his admission, nor before he has performed the work prescribed for him, as in the said Act [The Pauper Inmates Discharge and Regulation Act, 1871] mentioned; and where a casual pauper has been admitted on more than one occasion during one month into any casual ward of the same union, he shall not be entitled to discharge himself before nine o'clock in the morning of the fourth day after his admission, and he may at any time during that interval be removed by any officer of the guardians, or by a police constable, to the workhouse of the union, and be required to remain in such workhouse for the remainder of the period of his detention."

"Provided that in computing the number of days during which a casual pauper may be detained under this section, Sunday shall not be included."

"Provided also, with respect to the Metropolis, as follows:

"(1.) In determining the number of admissions of a casual pauper every casual ward in the Metropolis shall be deemed to be a casual ward of the same union:

"(2.) The expressions 'workhouse of the union' in this section shall include any workhouse and any asylum provided under the Metropolitan Poor Act, 1867, for the reception and setting to work of the casual poor, to which the casual poor of the union can be sent:"

Now, therefore, the following regulations shall, on and after the first day of January, one thousand eight hundred and eighty-three, be observed with respect to the discharge of casual paupers; that is to say,—

A casual pauper shall not be allowed to discharge himself at an earlier period than that at which he is entitled to discharge himself under the section above cited.

Provided as follows:—

(1.) The guardians may give any directions to the master of the workhouse, or to the superintendent of the casual ward, with respect to the discharge of any class or classes of casual

paupers before the expiration of the respective periods specified in the section above cited, and such directions shall be followed by the master or superintendent.

(2.) If in the opinion of the master of the workhouse, or the superintendent of the casual ward, any special circumstances shall require that a casual pauper shall be discharged before the expiration of either of the periods mentioned in the section above cited, he may discharge such pauper accordingly, and shall report the facts of the case to the guardians at their next meeting.

Dietary.

Art. 10.—The casual paupers received into the casual ward shall be dieted as prescribed in the Table in the Schedule B. hereto annexed.

Provided as follows:

1. The dietaries may be varied from time to time by a resolution of the guardians, approved by the Local Government Board.
2. If a casual pauper be sick or infirm, the medical officer of the workhouse or casual ward shall prescribe the dietary for such pauper.

Task of Work.

Art. 11.—The master of the workhouse or the superintendent of the casual ward shall set every casual pauper not suffering under any temporary or permanent infirmity of body to perform one of the tasks of work prescribed in the Schedule C. hereto annexed, according to the class to which he may belong.

Provided as follows:

1. A person shall not be required to perform the whole or any part of such task of work if it shall appear that the same is not suited to his age, strength, or capacity.
2. The tasks of work may be varied from time to time by a resolution of the guardians, approved by the Local Government Board.
3. Any task of work which, at the date when this order takes effect, shall have been approved by the Local Government Board in pursuance of the order hereby rescinded, shall remain in force until the guardians pass a resolution revoking it, and the master of the workhouse or the superintendent of the casual ward shall until such resolution is passed set every casual pauper within the terms of this Article to perform the task of work so approved, or one of the tasks of work prescribed in the Schedule C. hereto annexed according to the class to which he may belong.

General Regulations.

Art. 12.—The following regulations shall be observed by every casual pauper, viz.:—

1. He shall not use obscene or profane language, or act or write indecently or obscenely.
2. He shall not by word or deed insult or revile or threaten to strike or assault the master or matron, the superintendent of the casual ward, or any other officer or assistant officer in the employ of the guardians.

3. He shall not unlawfully strike or otherwise unlawfully assault any person.

He shall not smoke in the casual ward, or in any part of the premises connected therewith.

Art. 13.—In the event of any casual pauper being ill, the master of the workhouse or the superintendent of the casual ward shall, as soon as practicable, obtain the attendance of the medical officer, who shall give directions as to the treatment of such pauper, and if, in the opinion of the medical officer, the pauper cannot be properly treated in the casual ward, he shall be transferred to a sick ward of the workhouse, and be deemed to be an ordinary inmate thereof.

Art. 14.—Proper sleeping accommodation, consisting of separate cells, beds, or compartments, or other arrangements which have been approved by the Local Government Board, and suitable bed clothing, shall be provided in every casual ward; and, except in the case of a mother and her infant child or children, more than one casual pauper shall not be allowed to sleep in the same cell, bed, or compartment. Suitable means of communication between the inmates of the casual ward and the person having charge of the ward shall be provided.

Art. 15.—The master of the workhouse or the superintendent of the casual ward shall cause to be hung up and kept suspended in some conspicuous place in the casual ward and in the yard or room where the casual paupers are set to work, a printed copy of Articles 5, 6, 7, 9, and 12, of this Order, as well as of the dietary table and the tasks of work in force for the time being, and of section 7 of the "Pauper Inmates Discharge and Regulation Act, 1871," (omitting the provisoes to that section,) of section 44 of the "Divided Parishes and Poor Law Amendment Act, 1876," and of section 5 of the "Casual Poor Act, 1882."

Explanation of Terms.

Art. 16.—In this order—

The term "union" means a union of parishes under a general or local Act, with a separate Board of Guardians, and includes a parish or place for which there is a separate Board of Guardians.

The term "guardians" means guardians appointed under "The Poor Law Amendment Act, 1834," and the Acts amending the same, and includes guardians or any other body of persons performing under any Local Act the like functions as guardians under "The Poor Law Amendment Act, 1834."

The term "Metropolis" means the Metropolis as defined by the Metropolis Management Act, 1855, and includes any union which is wholly or for the greater part thereof comprised within the Metropolis as so defined.

The term "casual pauper" means any destitute wayfarer or wanderer applying for or receiving relief.

The term "casual ward" means any ward or wards, building, or premises set apart or provided for the reception and relief of destitute wayfarers and wanderers.

All words importing the masculine gender shall be deemed and taken to include females, and the singular to include the plural and the plural the singular, unless the contrary as to gender or number is expressly provided.

Schedule A.

Admission and Discharge Book for Casual Paupers.

_____ Union.

_____ *Master of the Workhouse at* _____

or Superintendent of the Casual Ward at _____

ADMITTED.							
Year, month, and day of the month.	Day of the week.	Hour of admission.	Names of casual pauper, wife, and family.	Age.	Calling or occupation.	Where he slept last night.	If any, what Money found when searched on admission.*

continued.

DISCHARGED.								
At what hour discharged.					What work done.	If not set to work, why?	To what place going.	Remarks.
1st day after admission.	2nd day after admission.	3rd day after admission.	4th day after admission.	5th day after admission.†				

* See the provision in the statute 11 & 12 Vict. c. 110. s. 10.
In unions within the Metropolis, columns must be added for *the nature and quantity of food given* and *the cost.*

† This column is only intended for cases where the period of detention includes Sunday.

Schedule B.

Dietary Table.

Casual Paupers who remain for One Night only.

Supper	Males above 15 years of age	8 oz. of Bread; *or* 6 oz. of Bread, and 1 pint of Gruel or 1 pint of Broth.
	Females above 15 years of age	6 oz. of Bread, and 1 pint of Gruel or 1 pint of Broth.
	Children from 7 to 15 years of age	
	Children under 7 years of age	4 oz. of Bread, and half-a-pint of Gruel or half-a-pint of Broth.

Breakfast—Same as Supper.

Casual Paupers who are detained for more than One Night.

Supper and Breakfast,	The same as above.	
Dinner for the first and each subsequent day after admission:	Males above 15 years of age	8 oz. of Bread and 1½ oz. of Cheese, *or* 6 oz. Bread and 1 pint of Soup.
	Females above 15 years of age	6 oz. of Bread and 1½ oz. of Cheese, *or* 5 oz. of Bread and 1 pint of Soup.
	Children from 7 to 15 years of age	
	Children under 7 years of age	4 oz. of Bread and 1 oz. of Cheese, *or* 3 oz. of Bread and half-a-pint of Soup.

The Gruel, Broth, and Soup to be made of the same ingredients and in the same proportions as are used in the Workhouse for those articles of diet.

Schedule C.

Tasks of Work.

Casual Paupers who remain for One Night only.

As regards Males —

The breaking of two cwt. of stones, or such other quantity not less than one-and-a-half cwt. nor more than four cwt. as the guardians, having regard to the nature of the stone, may prescribe. The stone shall be broken to such a size as the guardians, having regard to the nature thereof, may prescribe

or

The picking of one pound of unbeaten or two pounds of beaten oakum;

or

Three hours' work in digging or pumping, or cutting wood, or grinding corn.

As regards Females,—

The picking of half-a-pound of unbeaten or one pound of beaten oakum;

or

Three hours' work in washing, or scrubbing and cleaning.

Casual Paupers who are detained for more than One Night.

As regards Males, for each entire day of detention,—

The breaking of seven cwt. of stones, or such other quantity not less than five cwt. nor more than thirteen cwt. as the guardians, having regard to the nature of the stone, may prescribe. The stone shall be broken to such a size as the guardians, having regard to the nature thereof, may prescribe.

or

The picking of four pounds of unbeaten or eight pounds of beaten oakum;

or

Nine hours' work in digging or pumping, or cutting wood, or grinding corn.

As regards Females, for each entire day of detention,—

The picking of two pounds of unbeaten or four pounds of beaten oakum;

or

Nine hours' work in washing, scrubbing and cleaning, or needlework.

Given under the Seal of Office of the Local Government Board, this eighteenth day of December, in the year one thousand eight hundred and eighty-two.

(L.S.) J. G. Dodson, *President.*

Hugh Owen, *Secretary.*

Date of publication in the London Gazette, 19th December 1882.

No. 32.

General Order.—Casual Paupers: Rescinding Regulations.

To the Guardians of the Poor of the parish of Barrow-in-Furness, in the county of Lancaster;—

To the Guardians of the Poor of the Canterbury union, in the city and county of the city of Canterbury;—

To the Guardians of the Poor of the Coventry union, in the city of Coventry and county of Warwick;—

To the Governor, Deputy Governor, Assistants, and Guardians of the Poor of the city and county of Exon, known by the name of the Exeter Union;—

To the Guardians of the Poor of the Middlesbrough Union in the North Riding of the county of York;

To the Guardians of the Poor of the Pontardawe Union, in the counties of Brecknock and Glamorgan;—

And to all others whom it may concern.

Whereas Orders have been issued by the Local Government Board to the guardians of the several unions named in the first column of the Schedule to this Order, bearing the dates placed opposite to the names of such unions respectively in column 2 of that Schedule; and those orders contain in the articles thereof bearing the numbers set opposite to each order in the third column of that schedule, regulations with respect to casual paupers;

And whereas by a General Order bearing date the 18th day of December 1882, addressed to the guardians of the several unions in England and Wales for the time being, the Local Government Board

have prescribed regulations with respect to casual paupers, to take effect on and after the 1st day of January 1883 :

Now therefore, We, the Local Government Board, in pursuance of the powers given to Us by the Statutes in that behalf, hereby order as follows :—

Art. 1. The regulations contained in the several articles above-mentioned shall be rescinded on the 31st day of December 1882.

Provided that any task of work which, before the 1st day of January 1883, shall have been approved by the Local Government Board in pursuance of the regulations contained in any article hereby rescinded, shall remain in force until the guardians pass a resolution revoking it; and the master of the workhouse or the superintendent of the casual ward shall, until such resolution is passed, set every casual pauper within the terms of Article 11 of the General Order above cited, to perform the task of work so approved, or one of the tasks of work prescribed in the Schedule C. annexed to such General Order, according to the class to which he may belong.

Art. 2. The term "union" in this Order means a union of parishes under a General or Local Act, with a separate Board of Guardians, and includes a parish or place for which there is a separate Board of Guardians.

SCHEDULE.

Name of Union.	Date of Order.	Nos. of Articles.
Barrow-in-Furness	15 April 1876	128 to 140 (both inclusive).
Canterbury	8 April 1881	126 to 138 (both inclusive).
Coventry	13 April 1874	128 to 140 (both inclusive).
Exeter	30 May 1878	129 to 141 (both inclusive).
Middlesbrough	16 July 1875	128 to 140 (both inclusive).
Pontardawe	12 April 1875	128 to 140 (both inclusive).

Given under the Seal of Office of the Local Government Board, this twenty-first day of December in the year one thousand eight hundred and eighty-two.

(L.S.) J. G. DODSON, *President.*

HUGH OWEN, *Secretary.*

Date of publication in the London Gazette, 22nd December 1882.

Appendix B.

Reports and Inquiries.

		Page
No. 33.	Education of Pauper Children in the Northern District.—Report for 1882, by J. R. Mozley, Esq., Inspector of Poor Law Schools	74
No. 34.	Ditto in Western District. — Tables showing the Number of Children examined, together with the Results of the Examination :—furnished by the Rev. Dr. Clutterbuck, Inspector of Poor Law Schools	80
No. 35.	Ditto in Metropolitan District.—Report for 1882, by Wyndham Holgate, Esq., Inspector of Poor Law Schools	96
No. 36.	Ditto in the Midland and Eastern District.—Report for 1882, by Byam Davies, Esq., Inspector of Poor Law Schools	107
No. 37.	Turnpike Trusts and Highways.—General Report for 1880–81	110
No. 38.	Metropolis Water Act, 1871.—Report by Colonel Frank Bolton (Water Examiner)	120
No. 39.	Ditto.—Report by Allen Stoneham, Esq. (Auditor)	134
No. 40.	Metropolitan Water Supply. — Report by Professor Frankland, D.C.L., F.R.S., &c., on the Analysis of the Waters supplied during the year 1882	137

No. 33.

Education of Pauper Children in the Northern District.

Mr. Mozley's Report.

Report for the year 1882, by J. R. Mozley, Esquire, Inspector of Poor Law Schools.

Sir,

Results of the examinations in the schools of my district.

I will begin my Annual Report this year, as last year, with a summary of the results of the examinations in my district during the past year, in the three elementary subjects. The following table shows the result for every school in my district with the exception of Guisborough, which owing to accidental circumstances has not been examined during the present calendar year:

	Number of Children presented.	Passed in Reading.	Passed in Writing (including Spelling).	Passed in Arithmetic.
Standard VI.	153	136	135	92
„ V.	344	310	277	208
„ IV.	697	580	466	486
„ III.	1,046	993	811	825
„ II.	1,319	1,246	1,000	983
„ I.	1,515	1,300	1,124	1,163
Total	5,074	4,565	3,813	3,757

These bare figures, however, taken by themselves, will not convey any but a very meagre idea of the proficiency of the children to whom they relate. The following observations may be taken as interpreting their practical meaning.

There has been a slight diminution in the number of children presented in the Standards since last year, when the total number was 5,261. The greater part of this diminution is to be accounted for by the fact that four country unions, Leigh, Pontefract, Skirlaugh, and Driffield, now send their children to schools outside, whereas last year they had schools in the workhouse itself; besides that, as I said above, the Guisborough school is accidentally not included in this year's list. If all these schools had been excluded from my last year's list, the number 5,261 would be reduced to 5,144, or just 70 more than those presented this year; and this (as from other grounds is ascertainable) is just about the difference due to the diminution of pauperism (as far as the children are concerned) in my district. The difference due to this cause is, it will be seen, very slight, scarcely more than $1\frac{1}{3}$ per cent.

Taking the above tables simply as they stand, and comparing them with those which I gave last year, the proficiency of the children would appear to be almost exactly the same as it was then. Last year the ratio of the passes actually obtained to those which might have been obtained was nearly $79\frac{3}{5}$ per cent.; this year it is nearly $79\frac{3}{4}$ per cent. Such a difference is too minute to found any conclusion upon. But I think that on the whole I have raised the standard of the examinations during the present year; and this implies a real, though not very great, improvement in the schools of my district (the formal results being at any rate not worse this year than last).

Mr. Mozley's Report.

The most important respect in which I have raised the standard of examination during the year 1882, has been in estimating the reading of the three upper standards. I have never during this year passed any boy or girl, for reading, in Standards VI., V., or IV., who did not answer at least one question on the substance of the reading-book. The questions put by me have been very easy; generally they have been designed simply to test the memory of the children as to the narratives in their reading books; more rarely they have been on the meanings of words. I have scarcely ever refused to pass a child who gave a single correct answer; nor without putting six or seven questions, so as to be sure that the want of intelligence shown was no mere accident. It would be impossible, I think, to make this kind of test easier than, up to this time, I have made it; but notwithstanding this, it would be safe to say that four fifths of the failures in reading in the three upper standards have been due to want of intelligence, and not to the mere want of ability to read correctly.

In writing, I have during the past year slightly extended the use of composition instead of dictation (as a test) in the Fifth and Sixth standards, the alternative being allowed by the Code (which indeed regards composition as the more regular exercise in these standards). But there is great difficulty in requiring composition, even in the easiest form, from children in poor law schools; what has been hitherto done in this respect must be considered only a beginning.

The comparatively large proportion of failures in the arithmetic of the Fifth and Sixth standards is due to the fact, that in these standards alone I have given questions to be worked out which do not fall under the nameable rules of arithmetic (though I have sometimes approximated to such questions in the Fourth standard).

On the whole, taking this very important matter, the general intelligence of the children, as distinguished from mere correctness in the more mechanical parts of the subjects, I cannot but say, as I did last year, that much is wanting in this respect in the schools of my district. There is no question relating to the schools which engages my attention more; and two observations have occurred to me which, though somewhat outside the school routine, have I think a bearing on the subject.

Effect of industrial work on school proficiency.

The first concerns the proper regulation of the industrial work assigned to the children. There can be no doubt that an excess of industrial work, especially if of a hard and coarse nature, does blunt the faculties, and weary a child in body and mind too. I am very far from depreciating industrial work; on the contrary, I believe it to be capable of being of the greatest educational value; but not so, if it is imposed on a child in indiscriminate amount, and still more if it is evident that the child is being treated as a mere instrument for getting through necessary drudgery, and not as a living being to be trained. I have before my mind now a workhouse, and one supposed to be regulated on a plan of considerable enlightenment, in which the stuff supplied to the girls for their needlework was without exception of the very coarsest character, so that it was scarcely possible for them to make a buttonhole in it. How little can such work appeal to any sense of neatness or beauty! How wearisome must it be! yet the chief point that I am insisting on is not the fact of wrong kinds of industrial work being imposed on the children, but the excess in the amount of it. The two errors are, however, closely connected together; and I am satisfied, that if the industrial work of children in Poor Law schools were looked upon primarily from the educational point of view, the result would be a great improvement in general intelligence, and in the

Mr. Mozley's Report.

end no loss even in the amount of work done. I may mention one fact in confirmation of this view. At the Swinton schools, the girls' needlework used to be done entirely in the sewing-room, and no special effort was made to instruct each girl in each successive step, as prescribed in the Code of the Education Department. But lately the headmaster, Mr. Sutton, has introduced the standards of the Department in the needlework as well as in other subjects; the schoolmistresses, and not merely the sewingmistresses, join in teaching it as a portion of school work; and the result is that the work is done with at least equal facility as when the needlework was confined to the sewing-room. The worst kinds of industrial work from an educational point of view are, I should say, 1st, the mending of clothes when carried to such an extent as to debar girls from all other needlework; and 2ndly, the sweeping and cleaning of yards and large class-rooms. Of course I do not mean that either of these should be excluded from the training of children in Poor Law schools (it is obvious, especially, that girls ought to be taught mending); but there are no kinds of work that admit of being so misused.

The necessity of leisure time for the teachers.

The second observation that I have to make, as bearing on the improvement of the children in general intelligence, relates to the amount of work imposed on the teachers. There is great difference in this respect between different schools, just as there is in the other matter I have mentioned, that of the industrial work; and there is no intelligible reason for such differences. I have before my mind now two boys' schools; in one, which is about 20 per cent. the larger of the two, the schoolmaster is engaged in looking after the boys from the time when they get up in the morning to the time when they go to bed at night; in the other, the schoolmaster is entirely free before and after school hours. Such a case as this last is, it is true, quite the exception, and in my opinion it errs on the side of giving the schoolmaster too little to do, and too little connection with the boys; but in the other and far more common case the schoolmaster is too much pressed with work. A certain amount of time in each day during which the teacher's mind may be free from the pressure of duties is, I am certain, necessary for him to exercise the proper influence on the intelligence of the children.

In the above remarks I have only referred to those children who are presented in the standards; these, however, are by no means all that are present at my examinations. The total number of those who, during the past year, have been present at my examinations is 7,969, taking away the 5,074 who have been presented in the standards, there remain 2,895, who are the children below the standards, either on account of their tender years, or as having been too recently admitted into the school, and too ignorant before their admission, for any adequate instruction of them to have been possible. I invariably examine these children to some extent, though not of course so minutely as those who are in the standards.

Religious instruction of Roman Catholic children.

Before leaving the subject of school education, I wish to make one remark, and one quotation, concerning a matter which I hardly think I have mentioned before in these reports, the religious education of Roman Catholic children. In the large workhouses in Lancashire, and in some towns in other parts where the number of Roman Catholic poor is large, this is a point involving some difficulty; and the Roman Catholics are apt to think themselves not fairly dealt with in the religious opportunities allowed to them. When, therefore, they express themselves as decidedly satisfied on this point, the result is one that deserves, I think, to be recorded; and I have pleasure in quoting the following remarks

made by the Bishop of Salford at Swinton, on the occasion of a confirmation held by him at the schools. I quote from "The Catholic Times and Catholic Opinion" of March 10th, 1882 :— *Mr. Mozley's Report.*

"His Lordship expressed himself well pleased to find the children so "well taught and so carefully trained, and whilst congratulating them "he pointed out to the children the great blessings and privileges "which they now enjoyed in that institution. They had a Catholic "master and a Catholic mistress, and the daily services of a priest. The "building in which they were assembled had been enlarged since he "was there last, and had been supplied with the requisites for a chapel. "They had, moreover, every facility accorded for the acquisition of the "knowledge of their faith, and for the exercise of their spiritual duties. "He rejoiced to know that there was a good spirit among the children, "and a growing piety. He felt that they were exceptionally favoured. "He did not know of any similar institution where the Catholic "children were so considerately provided for, and so justly dealt with "in the matter of their religious training."

The "Catholic master and Catholic mistress" referred to by the Bishop are of course assistants in the school.

Observations on the plan of sending workhouse children to schools outside the workhouse.

The tendency, in some large as well as small unions, to dispense with the services of a schoolmaster or schoolmistress, and to send the children to schools outside the workhouse, is growing in the northern district. I have already mentioned four unions that during the past year have adopted this plan; and at the Poor Law Conference of Yorkshire Guardians held at Halifax this December, a paper was read by the Vice-Chairman of the Halifax Guardians advocating it strongly, which was received with a remarkable degree of assent by those present at the Conference. I am myself disposed to think well of this method of workhouse education. There cannot be a doubt that under it the ordinary school education goes on with a regularity which is not maintained without great difficulty in a small or moderate sized workhouse school; for in a workhouse school there is a perpetual tendency to consider the education as inferior to the necessities of the house, and this, as I have remarked at some length above, is detrimental to both children and teachers. Also the workhouse children, by contact with the children in the school outside, shake off much of that inertness which is apt to characterise them when they spend the whole day in their own company, and between four walls. And there is another point, not of great magnitude in itself, nor one in which there is any necessary difference between this system and the workhouse school system, but in which as a matter of fact a reform often is made when the children are sent to a school outside; I mean in reference to their dress. It very often happens, when the children are sent to a school outside, that the guardians become aware of the inconveniences produced by absolute uniformity of dress, and give each child clothing of a distinct colour and stuff. This change is certainly one of a very humanising kind. On the other hand, there are one or two difficulties which ought to be considered in adopting this system of education. The industrial work, which in ordinary workhouse schools is apt to be in excess (at any rate among the girls) here sometimes goes to the wall; the home lessons taking up the greater part of the evenings. It would require but a little consideration to set this matter right, and I do not bring it forward as an objection, but merely as a point to be attended to. Another difficulty relates to the question of supervision of the children out of school hours. When there is no schoolmaster or schoolmistress, who is to discharge the functions of these officers in this respect? This question cannot quite be laid aside. The religious

Mr. Mozley's Report.

instruction of children who are sent to schools outside the workhouse is not always provided for; Sunday schools, however, according to the religious body to which each child belongs, supply a means of solving this difficulty. Yet in saying this, I cannot but express the hope that such schools may not be made a burden to the children; for the undue multiplication of religious services and duties is not an unknown thing in workhouses, and in these institutions to make Sunday a burdensome day is no slight error, and I am afraid not one at all unknown. Lastly, when children are sent to schools outside the workhouse, there is no necessarily prescribed means of keeping the guardians informed of their proficiency and industry; it is possible, therefore, that guardians may remain ignorant on this point, which is very undesirable. The best method that I know of securing that this possibility may not become an actuality, is one that also serves to increase the interest of the children in their work; namely, by the guardians giving cards of merit to those children who are successful in passing any standard in all the three elementary subjects. The cards I refer to are not unfrequently given by the managers of public elementary schools, and are designed to record the children's success (the standard in which each child is examined, being noted on them); any school stationer will supply them; they are always inexpensive and often elegant. I need not say that if the plan of sending workhouse children to schools outside the workhouse became anything like universal, the duties of the school inspectors of your Board would be rendered very different from what they now are; yet even so, the education of children under the Poor Law would supply a large field for inquiry and supervision.

Letter written by a boy sent to the fishing trade from a workhouse.

Two years ago I quoted in my Annual Report a very pleasing letter written by a girl who had been sent from a workhouse school to domestic service. The following letter,* written by a boy who had been sent from the Ripon workhouse to be an apprentice on board a fishing smack, does not refer so much to life in a workhouse as the one which I then quoted; yet it is clear that the relations of the boy to the workhouse master (to whom the letter is written) are excellent; it is, moreover, well expressed, it shows the lad to be observant and well educated, and it throws a more agreeable light on the fishing trade than some recent disclosures would be calculated to suggest:—

Fisherlads' Institute, Orwell Street, Grimsby,
May 24th, 1882.

Dear Sir,

I am thankful to have the pleasure of writing to you, after being detained by our vessel getting rather farther than we wanted to. First of all I will tell you, that I am well pleased with my occupation. We do not live altogether in one building, as I expected we would; we live in separate houses, and scattered all over the town. Grimsby is not a very large town, but you have no idea what trade is carried on in the fishing line. As for my first voyage, I consider it a very pleasant one indeed. We started the day after I came to Grimsby, Wednesday, May 10th, and landed at 12 o'clock to-day. We have been up the coast of Norway, and I had the satisfaction of seeing the coast itself, besides having the idea of the size of a mountain, being 60 or 70 miles from the coast itself, and yet it seemed as high as any part of the coast of Yorkshire. Our skipper seeing us so far out gave

* Since writing this report I have seen other interesting letters written by the same boy, and numerous letters written by other children who had been sent out from Poor Law schools; of which I may particularly mention two very graphic letters by a boy who had gone to the Western States of America, addressed to the master of the Ripon Workhouse; and one by a girl from the Swinton Schools who had settled and married in Australia, to Mr. Charlewood, one of the Manchester guardians. Reading letters such as these, and seeing the affection which they express for the place where, and the persons by whom, the writers of them were educated, one cannot but be indignant at the gross misrepresentations often circulated as to the results of Poor Law education.

Mr. Mozley's Report.

orders that the lines should be brought out and baited. Baiting is no small matter in a vessel like ours. You may fancy how much we have to bait, when we begin at 6 o'clock in the morning and don't get done till 4 or 5 at night. Last Saturday while drawing in our lines for the last time, we drew up what is called the "Devil fish," and a curious fellow he was to be sure. He had a pair of pockets, a pair of human hands, and a tremendous cavern of a mouth. He was cleaned out and salted, and we have him yet, and they say his tail will bring half a sovereign. On Monday, we sighted Whitby and Scarbro', and on the same day we sighted Flambro' Head. Our vessel is called the "Carl," and the skipper "Robert Porter." We have 11 hands. I am well fed, well clothed, and happy in my situation, which through your kindness I am destined to serve. I try to keep myself steady, and do my duty, and I trust I will always do so. I thank you for your past kindness towards me, and sign myself

Yours respectfully,
J.——— W.———.

P.S.—If it will not trouble you, I will write to you when I come back every trip.

I am told that every lad apprenticed in this firm is allowed to go home for a short holiday if he wants to, so that if you will allow me, I can come and stay for a week or a fortnight (which I shall be very glad to do) next year, if all be well.

Yours truly,
J.——— W.———.

The use of voluntary agencies for visiting children sent out from workhouses as servants or apprentices.

With respect to the after career of workhouse children in general, I may mention that the visiting of them when in service by benevolent persons in no recognised official connexion with the Poor Law, is assuming larger dimensions. For instance, all the girls and most of the boys sent out from the Nottinghamshire unions are visited by a society of ladies under the presidency of Miss Mason, of Morton Hall, East Retford. Other unions are connected with the Girls' Friendly Society. This movement is, I think, likely to be very beneficial; both because it comes in to assist the machinery of the Poor Law exactly where this is the weakest, and because a certain elasticity and informality is desirable in the supervision of children who are, technically speaking, their own masters. An excellent paper read by Miss Mason at the Poor Law Conference held in London this last December, gave an account of the methods pursued by her own society, and suggestions for improved methods in the future.

I have, &c.
J. R. Mozley,
Inspector of Poor Law Schools.

The Right Hon. Sir Charles Dilke, M.P.,
President of the Local Government Board.

No. 34.

Dr. Clutterbuck's Report.

TABLES showing the NUMBERS EXAMINED, together with the RESULTS of the EXAMINATION of CHILDREN in the several SCHOOLS in the WESTERN DISTRICT.—Furnished by the REV. DR. CLUTTERBUCK, Inspector of Poor Law Schools.

TABLE I.

GENERAL SUMMARY.

Numbers on the books on the day of inspection:

England	4,562
Wales	971
Total	5,533

ENGLAND.

Number *presented* in Standards		*Passed* in		
	Standards	Reading.	Writing.	Arithmetic.
I. 832	I.	589	825	718
II. 799	II.	762	563	655
III. 779	III.	719	611	646
IV. 460	IV.	440	294	340
V. 176	V.	146	136	140
VI. 53	VI.	46	39	49
VII. 1	VII.	0	0	0
Total 3,100	—	2,702	2,468	2,548

WALES.

Number *presented* in Standards		*Passed* in		
	Standards	Reading.	Writing.	Arithmetic.
I. 151	I.	100	150	141
II. 191	II.	177	129	161
III. 175	III.	171	134	144
IV. 110	IV.	107	90	89
V. 23	V.	15	18	18
VI. 6	VI.	5	5	5
Total 656	—	575	526	558

Passed in READING, WRITING, and ARITHMETIC.

—	Standards							
	I.	II.	III.	IV.	V.	VI.	VII.	Total.
ENGLAND	552	521	538	226	114	25	0	1,976
WALES	96	117	113	78	14	3	—	421

GRAND TOTAL.

Number *presented* 3,756. *Passed* in Reading 3,277. Writing 2,994. Arithmetic 3,106. Passed in all subjects 2,397.

TABLE II.

CHESHIRE, SALOP, HEREFORD, MONMOUTH, AND NORTH AND CENTRAL WALES.

UNION.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
CHESHIRE.																							
Altrincham - -	25	7	3	1	3	1	..	15	R.	5	3	1	3	1	..	13	2	3	1	2	1	..	9
									W.	6	3	1	3	1	..	14							
									A.	3	3	1	2	1	..	10							
Birkenhead - -	187*	37	41	27	22	..	..	127	R.	27	41	23	22	..	..	113	21	38	18	18	..	..	95
									W.	37	39	23	21	..	..	120							
									A.	30	39	25	18	..	..	112							
Chester - - -	145†	29	27	19	13	4	2	94	R.	12	25	18	13	4	2	74	12	14	13	9	4	2	64
									W.	28	15	14	12	4	2	73							
									A.	27	22	18	10	4	2	83							
Congleton - -	34	7	6	3	3	2	3	24	R.	1	5	3	3	2	3	17	0	0	2	2	2	2	8
									W.	7	1	2	2	2	3	17							
									A.	5	4	2	3	2	2	18							
Nantwich - -	61	15	9	10	4	..	..	38	R.	8	8	10	4	..	..	30	8	5	9	4	..	..	26
									W.	13	7	9	4	..	..	33							
									A.	12	6	10	4	..	..	32							
Northwich - -	Children attend National School.																						
Tarvin - - -	26	9	..	3	3	2	..	17	R.	9	..	3	3	2	..	17	8	..	3	3	1	..	15
									W.	9	..	3	3	2	..	17							
									A.	8	..	3	3	1	..	15							
Wirral - - -	32	3	7	6	..	2	..	18	R.	3	7	6	..	2	..	17	2	7	3	..	2	..	14
									W.	3	7	5	..	2	..	17							
									A.	3	7	4	..	2	..	16							

* 87 boys, 77 girls, 23 infants.

† 72 boys, 73 girls.

Dr. Clutterbuck's Report.

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Salop.																							
Atcham - - -	122*	16	15	13	..	5	3	52	R.	12	15	13	..	5	3	48	12	15	13	..	5	3	48
									W.	16	14	13	..	5	3	51							
									A.	16	15	13	..	5	3	52							
Church Stretton -	32	2	3	5	6	..	..	16	R.	2	3	5	6	..	..	16	2	2	4	4	..	..	12
									W.	2	2	4	5	..	..	13							
									A.	2	3	5	4	..	..	14							
Ludlow - - -	33	3	4	5	3	2	..	17	R.	3	4	5	3	2	..	17	3	4	4	0	2	..	13
									W.	3	4	5	0	2	..	14							
									A.	3	4	5	1	2	..	15							
Oswestry - - -	42	7	8	9	5	3	1	33	R.	4	6	8	5	3	1	27	4	3	6	5	1	0	19
									W.	2	8	6	5	3	1	27							
									A.	7	3	7	5	1	0	23							
S.E. Shrop. Dist. School.	184†	34	44	41	14	6	..	139	R.	31	42	41	14	5	..	133	13	25	33	8	4	..	83
									W.	38	30	36	11	4	..	119							
									A.	15	37	37	8	5	..	102							
Wellington - -	36	3	10	7	4	1	..	25	R.	3	10	7	4	1	..	25	3	8	6	2	1	..	20
									W.	3	8	6	3	1	..	21							
									A.	3	10	7	2	1	..	23							
Wem - - -	17	4	4	..	9	..	..	17	R.	4	4	..	9	..	..	17	3	4	..	6	..	..	13
									W.	4	4	..	8	..	..	16							
									A.	3	4	..	7	..	..	14							
Whitchurch - -	28	5	6	6	5	..	..	22	R.	2	6	6	5	..	..	19	2	5	5	1	..	..	13
									W.	4	5	5	3	..	..	17							
									A.	4	5	5	2	..	..	16							

* 64 boys, 58 girls.

† 108 boys, 76 girls.

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
HEREFORD.																							
Dore - - -	..	5	4	7	..	..	..	16	R.	5	2	7	..	..	..	14	0	1	1	..	..	..	2
									W.	4	1	2	..	..	..	7							
									A.	0	3	2	..	..	..	5							
Hereford - - -	102*	16	10	20	15	5	8	74	R.	13	8	20	15	5	8	69	13	6	16	12	5	8	60
									W.	16	7	18	14	5	8	68							
									A.	16	8	17	12	5	8	66							
Ledbury - - -	37	7	5	4	8	3	..	27	R.	6	5	4	8	3	..	26	6	1	4	6	3	..	20
									W.	7	3	4	7	3	..	24							
									A.	7	1	4	7	3	..	22							
Ross - - - -	52	8	9	8	6	..	..	31	R.	4	8	7	6	..	..	25	4	4	4	2	..	..	14
									W.	8	4	5	3	..	..	20							
									A.	8	7	8	2	..	..	25							
Weobley - - -	22	5	..	5	1	3	..	14	R.	4	..	5	1	3	..	13	4	..	5	1	3	..	13
									W.	5	..	5	1	3	..	14							
									A.	5	..	5	1	3	..	14							
MONMOUTH.																							
Abergavenny - -	36	5	6	2	4	1	..	18	R.	4	6	2	4	1	..	17	3	3	2	2	0	..	10
									W.	5	4	2	3	1	..	15							
									A.	3	5	2	3	0	..	13							
Bedwelty - -	76	17	10	7	4	3	..	41	R.	15	10	6	3	2	..	36	14	5	4	1	1	..	25
									W.	17	5	5	3	2	..	30							
									A.	16	10	6	3	3	..	39							

* 63 boys, 39 girls.

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Monmouth—*cont.*																							
Monmouth - -	35	6	4	2	..	..	..	12	R. W. A.	6 6 6	4 3 4	1 1 2	.. .. ..	.. .. ..	.. .. ..	11 10 12	6	3	1	..	..	..	10
Newport (separate schools at Caerleon).	194*	29	36	46	34	8	3	156	R. W. A.	15 29 25	33 23 32	39 28 31	31 29 26	6 6 4	3 1 3	127 116 121	13	21	20	25	3	1	83
†Pontypool - -	50	8	7	12	3	3	..	33	R. W. A.	3 8 8	7 3 5	10 8 9	3 2 1	3 3 3	.. .. ..	26 24 26	2	3	7	1	3	..	16
Wales.																							
Holyhead - -	37	3	4	3	..	..	..	10	R. W. A.	3 3 3	4 2 4	3 3 2	.. .. ..	.. .. ..	.. .. ..	10 8 9	3	2	2	..	..	..	7
Carnarvon - -	52	..	9	5	4	..	..	18	R. W. A.	.. .. ..	9 1 2	5 4 4	4 2 4	.. .. ..	.. .. ..	18 7 10	..	1	4	2	..	..	7
Conway - - -	Children now sent out to school.																						
Ruthin - - -	Children now sent out to school.																						

* 100 boys, 70 girls, 24 infants.

† The schools are entirely detached from the workhouse.

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Wales—*cont.*																							
Wrexham - -	98	20	10	12	6	3	..	51	R.	18	10	12	6	3	..	49	18	7	8	5	2	..	40
									W.	20	7	9	6	3	..	45							
									A.	20	10	10	5	2	..	47							
S. Asaph - - -	37	4	8	6	..	3	..	21	R.	2	7	6	..	3	..	18	2	5	5	..	3	..	15
									W.	4	6	5	..	3	..	17							
									A.	4	7	6	..	3	..	20							
Holywell - - -	55	10	7	16	..	..	..	33	R.	10	5	16	..	..	..	31	7		13	..	..	..	23
									W.	10	5	16	..	..	..	31							
									A.	8	6	13	..	..	..	27							
Forden - - -	33	7	7	2	4	..	..	20	R.	5	6	2	4	..	..	17	5	3	2	2	..	..	15
									W.	6	6	2	3	..	..	17							
									A.	5	6	2	2	..	..	15							
Newtown - -	..	10	10	14	10	..	..	44	R.	6	10	14	10	..	..	40	6	10	10	10	..	..	36
									W.	10	10	12	10	..	..	42							
									A.	10	10	12	10	..	..	42							
Knighton - -	36	9	8	3	5	1	2	28	R.	5	8	3	5	1	2	24	5	4	1	3	0	2	15
									W.	9	4	2	3	1	2	21							
									A.	9	5	2	4	0	2	22							
Rhyader - - -	Children now sent out to school.																						
Builth - - -	25	2	3	3	4	1	..	13	R.	2	3	3	4	1	..	13	2	2	3	4	1	..	12
									W.	2	2	3	4	1	..	12							
									A.	2	3	3	4	1	..	13							

Dr. Clutterbuck's Report.

TABLE II.—*continued.*

GLAMORGANSHIRE, WORCESTERSHIRE, GLOUCESTERSHIRE, WILTS, HANTS, SOMERSET, AND DORSET.

UNION.	No. on Books on day of Inspection.	Number *presented* in Standards.							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
GLAMORGANSHIRE.																							
Bridgend (*Cottage Homes*).	69	11	16	11	8	..	..	46	R.	10	16	11	8	..	..	45	10	16	10	8	..	..	44
									W.	11	16	11	8	..	..	46							
									A.	11	16	10	8	..	..	45							
Ely (Cardiff) - -	216*	30	42	44	28	2	..	146	R.	14	40	43	27	2	..	126	14	23	26	16	1	..	80
									W.	30	27	36	22	2	..	117							
									A.	27	38	36	20	1	..	122							
Aberdare - - -	142	18	36	26	23	6	4	113	R.	6	30	23	22	5	3	89	6	19	13	17	3	1	59
									W.	18	24	15	18	4	3	72							
									A.	18	33	23	18	4	3	99							
Pontardawe - -	18	3	7	..	1	..	..	11	R.	2	7	..	1	..	..	10	2	7	..	1	..	..	10
									W.	3	7	..	1	..	..	11							
									A.	3	7	..	1	..	..	11							
WORCESTERSHIRE.																							
Droitwich - -	34	7	5	3	3	..	..	18	R.	7	5	3	3	..	..	18	7	5	2	2	..	..	16
									W.	7	5	2	2	..	..	16							
									A.	7	5	2	2	..	..	16							
Martley - - -	16	3	4	2	2	3	..	14	R.	2	4	2	2	3	..	13	1	2	2	1	..	..	6
									W.	1	3	1	1	..	..	6							
									A.	2	3	1	1	2	..	9							
Worcester - -	65	8	18	8	6	..	..	40	R.	5	17	8	6	..	..	36	5	13	5	4	..	..	27
									W.	6	14	6	4	..	..	32							
									A.	5	17	7	4	..	..	36							
GLOUCESTERSHIRE.																							
Barton Regis - -	254†	47	43	39	20	12	3	164	R.	37	43	26	14	12	3	140	36	30	17	11	7	2	103
									W.	47	36	21	13	7	2	126							
									A.	46	34	26	15	11	3	135							

* 49 infants, 73 infants, 94 boys. † 68 infants, 71 girls, 115 boys.

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Gloucestershire —*cont.*																							
Bristol	140*	36	22	20	4	..	...	82	R.	35	22	19	4	..	..	80	35	22	18	3	..	..	78
									W.	35	22	19	4	..	..	80							
									A.	36	22	20	3	..	..	81							
Chipping Sodbury	22	4	3	7	..	..	..	14	R.	0	3	7	..	..	..	10	0	1	4	..	..	..	5
									W.	2	1	4	..	..	..	7							
									A.	0	1	5	..	..	..	6							
Gloucester	28	7	5	3	1	..	..	16	R.	6	3	3	1	..	..	13	6	1	3	1	..	..	11
									W.	7	1	3	1	..	..	12							
									A.	7	4	3	1	..	..	15							
Newent	17	4	3	5	..	..	..	12	R.	3	3	5	..	..	..	11	3	2	5	..	..	..	10
									W.	4	2	5	..	..	..	11							
									A.	4	3	5	..	..	..	12							
Northleach	12	1	1	1	2	3	..	8	R.	0	1	1	2	3	..	7	0	0	0	0	3	..	3
									W.	1	0	1	2	3	..	7							
									A.	1	0	0	0	3	..	3							
Stroud	39	5	6	3	4	3	..	21	R.	2	5	3	2	1	..	13	2	1	2	1	0	..	6
									W.	5	1	2	3	0	..	11							
									A.	5	3	2	3	1	..	14							
Thornbury	35	6	4	7	3	1	..	21	R.	4	3	7	3	1	..	18	4	2	4	1	0	..	11
									W.	6	3	5	2	0	..	15							
									A.	6	2	6	2	0	..	16							
Westbury-on-Severn	73	13	10	11	6	11	2	53	R.	12	10	11	6	10	2	51	12	10	10	6	6	2	46
									W.	13	10	10	6	8	2	49							
									A.	13	10	11	6	6	2	48							
Cirencester	43	4	10	3	3	..	..	20	R.	4	8	1	3	..	..	16	4	1	1	1	..	..	7
									W.	4	3	2	2	..	..	11							
									A.	4	4	2	1	..	..	11							

* 36 infants, 39 girls, 65 boys.

Dr. Clutterbuck's Report.

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Wilts.																							
Alderbury	62	13	10	10	4	..	..	37	R.	5	7	9	2	..	..	23	4	4	7	1	..	..	16
									W.	11	5	8	2	..	..	26							
									A.	10	9	9	2	..	..	30							
Amesbury	25	..	8	6	2	2	3	21	R.	..	7	5	2	2	3	19	..	1	3	1	2	3	10
									W.	..	2	5	1	2	3	13							
									A.	..	2	4	1	2	3	12							
Bradford	32	4	8	1	4	4	VI .. / VII 1	22	R.	2	8	1	4	4	VI .. / VII 0	19	2	6	0	4	2	VI .. / VII 0	14
									W.	4	6	0	4	2	.. 0	16							
									A.	3	8	1	4	2	.. 0	18							
Chippenham	22	4	5	2	5	..	..	16	R.	1	4	2	5	..	..	12	1	1	2	5	..	..	9
									W.	4	2	2	5	..	..	13							
									A.	4	2	2	5	..	..	13							
Malmesbury	17	..	3	4	1	..	..	8	R.	..	3	4	1	..	..	8	..	0	2	0	..	..	2
									W.	..	0	3	1	..	..	4							
									A.	..	1	2	0	..	..	3							
Melksham	30*	6	4	2	4	..	..	16	R.	4	4	2	4	..	..	14	0	2	1	1	..	..	4
									W.	5	3	1	3	..	..	11							
									A.	0	2	1	1	..	..	5							
Pewsey	21	..	2	6	3	1	..	12	R.	..	2	6	3	0	..	11	..	1	3	2	0	..	6
									W.	..	1	6	2	0	..	9							
									A.	..	2	3	3	1	..	9							
Westbury	25	2	2	9	1	..	..	14	R.	0	0	9	1	..	..	10	0	0	7	1	..	..	8
									W.	0	0	7	1	..	..	8							
									A.	0	0	7	1	..	..	8							
Hants.																							
Christchurch	29	2	6	4	..	4	..	16	R.	2	6	4	..	4	..	16	0	3	3	..	4	..	10
									W.	2	5	3	..	4	..	14							
									A.	0	4	4	..	4	..	12							

* Girls only. Owing to special circumstances the boys were not examined this year.

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Hants—*cont.*																							
Lymington - -	Children sent to National school.																						
New Forest - -	29	3	5	7	4	3	..	22	R.	3	5	6	4	2	..	20	3	3	5	4	1	..	16
									W.	3	4	5	4	2	..	18							
									A.	3	3	7	4	2	..	19							
Fordingbridge -	19	4	..	..	2	1	4	11	R.	4	..	..	2	1	4	11	4	..	..	2	1	4	11
									W.	4	..	..	2	1	4	11							
									A.	4	..	..	2	1	4	11							
Ringwood - -	15	2	1	2	3	..	..	7	R.	0	..	1	3	..	..	4	0	..	0	0	..	..	0
									W.	2	..	1	0	..	..	3							
									A.	2	..	0	1	..	..	3							
Somersetshire.																							
Bath - - -	161*	32	31	22	8	10	4	107	R.	25	31	21	8	10	4	99	25	27	18	8	10	4	92
									W.	32	28	19	8	10	4	101							
									A.	33	29	21	8	10	4	104							
Bedminster - -	115†	16	17	15	22	4	6	80	R.	12	17	10	21	2	5	67	9	12	8	8	2	4	43
									W.	16	13	9	14	3	4	59							
									A.	12	16	15	16	3	6	68							
Clutton - -	35	5	5	7	5	5	..	27	R.	3	5	6	5	3	..	22	3	0	3	3	3	..	12
									W.	5	2	5	3	4	..	19							
									A.	5	0	3	4	3	..	15							
Dulverton - -	12	3	..	2	1	1	..	7	R.	3	..	1	1	1	..	6	3	..	1	1	1	..	6
									W.	3	..	1	1	1	..	6							
									A.	3	..	2	1	1	..	7							
Frome - - -	56	9	10	10	5	..	..	34	R.	7	9	9	5	..	..	30	7	8	7	4	..	..	26
									W.	9	9	8	5	..	..	31							
									A.	9	9	7	4	..	..	29							

* 40 infants, 49 girls, 72 boys.

† 63 boys, 52 girls.

Dr. Clutterbuck's Report.

TABLE II.—*continued.*

Union.	No on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Somerset—*cont.*																							
Keynsham	21	1	7	2	4	1	..	15	R.	1	7	2	4	1	..	15	1	3	1	3	1	..	9
									W.	1	4	1	3	1	..	10							
									A.	1	4	1	4	1	..	11							
Langport	24	2	2	7	..	..	..	11	R.	2	2	0	..	..	..	10	0	2	3	..	..	..	5
									W.	2	2	2	..	..	..	7							
									A.	6	3	5	..	..	..	7							
Shepton Mallet	51	11	6	4	5	..	..	26	R.	3	6	4	5	..	..	18	3	4	2	4	..	..	13
									W.	11	4	2	4	..	..	21							
									A.	11	6	2	4	..	..	23							
Taunton	15	2	1	2	2	..	..	7	R.	2	1	2	2	..	..	7	2	0	1	2	..	..	5
									W.	2	0	1	2	..	..	5							
									A.	2	1	1	2	..	..	6							
Wellington	55	6	7	6	6	4	..	29	R.	5	7	6	6	4	..	28	5	4	5	5	3	..	22
									W.	6	5	5	6	3	..	25							
									A.	6	6	5	5	4	..	26							
Wells	43	5	7	9	4	4	3	32	R.	4	7	7	3	3	0	24	4	2	5	2	0	0	13
									W.	5	2	7	2	3	1	20							
									A.	5	3	7	3	1	1	20							
Williton	41	2	6	11	2	5	3	29	R.	0	5	11	2	3	2	23	0	3	6	0	3	2	14
									W.	2	5	7	1	4	2	21							
									A.	0	4	8	0	5	3	20							
Wincanton	73	16	9	13	5	6	1	59	R.	13	9	13	5	6	1	47	13	9	13	5	6	1	47
									W.	16	9	13	5	6	1	50							
									A.	16	9	13	5	6	1	54							
Yeovil	Children attend school in the town.																						

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Dorset.																							
Beaminster - -	15	..	3	2	1	..	..	6	R.	..	2	2	0	..	..	4	..	2	1	0	..	..	3
									W.	..	3	1	0	..	..	4							
									A.	..	3	1	1	..	..	5							
Blandford - -	27	3	2	6	..	..	..	11	R.	2	2	6	..	..	..	10	2	0	6	..	..	..	8
									W.	3	0	6	..	..	..	9							
									A.	3	2	6	..	..	..	11							
Bridport - - -	39	4	8	..	1	..	..	13	R.	4	6	..	0	..	..	10	3	2	..	0	..	..	5
									W.	4	5	..	1	..	..	10							
									A.	3	6	..	0	..	..	9							
Dorchester - -	28	3	7	1	2	..	..	13	R.	2	6	1	2	..	..	11	2	2	1	1	..	..	6
									W.	3	4	1	1	..	..	9							
									A.	2	4	1	1	..	..	8							
Poole - - -	24	3	5	6	6	..	..	20	R.	2	5	6	6	..	..	19	2	2	1	5	..	..	10
									W.	3	2	2	6	..	..	13							
									A.	3	5	3	5	..	..	16							
Shaftesbury - -	33	3	4	5	3	4	..	19	R.	3	3	5	3	4	..	18	..	..	..	..	..	..	..
									W.	3	1	2	2	3	..	11							
									A.	2	2	4	3	3	..	14							
Sturminster - -	16	2	5	1	4	..	..	12	R.	1	5	0	3	..	..	9	1	3	0	3	..	..	7
									W.	2	3	1	4	..	..	10							
									A.	1	4	1	3	..	..	9							
Wareham - -	23	2	3	7	3	..	..	15	R.	2	3	6	3	..	..	14	2	1	6	3	..	..	12
									W.	2	1	6	3	..	..	12							
									A.	2	3	7	3	..	..	15							
Wimborne - -	21	2	3	4	3	2	..	14	R.	1	3	4	3	0	..	11	1	1	3	2	0	..	7
									W.	2	1	3	2	0	..	8							
									A.	2	2	3	3	0	..	10							

Dr. Clutterbuck's Report.

TABLE II.—*continued.*

DEVON, CORNWALL, PEMBROKE, and CARMARTHENSHIRE.

UNION.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
DEVON.																							
Barnstaple	48	7	8	7	6	1	..	29	R.	7	8	7	6	1	..	29	7	7	6	6	1	..	27
									W.	7	7	6	6	1	..	27							
									A.	7	7	6	6	1	..	27							
Bideford	20	8	4	6	..	..	..	18	R.	6	4	6	..	..	..	16	4	4	6	..	..	..	14
									W.	8	4	6	..	..	..	18							
									A.	5	4	6	..	..	..	15							
Crediton	29	4	2	8	4	1	..	19	R.	3	2	8	4	1	..	18	2	1	6	4	1	..	14
									W.	4	2	6	4	1	..	17							
									A.	2	1	8	4	1	..	16							
East Stonehouse	20	4	6	2	2	..	..	14	R.	4	6	2	2	..	..	14	4	2	2	2	..	..	10
									W.	4	2	2	2	..	..	10							
									A.	4	6	2	2	..	..	14							
Honiton	35	6	4	7	1	..	..	18	R.	5	3	7	1	..	..	16	5	0	3	1	..	..	9
									W.	6	1	3	1	..	..	11							
									A.	6	2	3	1	..	..	12							
Kingsbridge	38	6	6	11	5	..	..	28	R.	5	6	11	5	..	..	27	5	4	9	5	..	..	23
									W.	6	6	9	5	..	..	26							
									A.	6	4	10	5	..	..	25							
Newton Abbot	103*	20	12	7	19	1	..	59	R.	18	12	7	19	1	..	57	18	9	6	19	1	..	53
									W.	20	10	6	19	1	..	56							
									A.	20	10	7	19	1	..	57							
Okehampton	26	3	8	4	..	..	..	15	R.	3	8	3	..	..	..	14	3	8	3	..	..	..	14
									W.	3	8	3	..	..	..	14							
									A.	3	8	4	..	..	..	15							

* 48 boys, 55 girls.

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Devon—*cont.*																							
Plymouth - -	110*	20	16	14	9	7	3	69	R.	18	15	12	8	5	2	60	17	11	7	4	3	2	44
									W.	19	14	9	6	5	3	56							
									A.	18	12	13	6	5	3	57							
Plympton - -	33	4	4	5	6	..	..	19	R.	4	4	4	6	..	..	18	4	2	3	0	..	..	9
									W.	4	2	4	2	..	..	12							
									A.	4	3	4	0	..	..	11							
S. Molton - -	28	6	2	7	8	1	..	24	R.	3	2	7	8	1	..	21	3	1	6	6	1	..	17
									W.	6	2	7	8	1	..	24							
									A.	6	1	6	1	1	..	20							
Stoke Damerel -	53	9	6	13	5	4	..	37	R.	8	5	12	5	4	..	34	3	3	8	2	4	..	20
									W.	9	5	12	3	4	..	33							
									A.	4	3	10	3	4	..	24							
Tavistock - -	35	7	4	8	4	..	..	23	R.	4	3	6	3	..	..	16	2	2	3	1	..	..	8
									W.	7	2	5	2	..	..	16							
									A.	5	2	6	1	..	..	14							
Thomas, St. - -	37	5	6	11	4	..	..	26	R.	5	6	11	4	..	..	26	5	5	11	4	..	..	25
									W.	5	5	11	4	..	..	25							
									A.	5	5	11	4	..	..	25							
Tiverton - - -	54	18	9	8	2	..	..	37	R.	13	9	7	2	..	..	31	12	9	7	2	..	..	30
									W.	17	9	7	2	..	..	35							
									A.	16	9	7	2	..	..	34							
Torrington - -	30	5	3	7	3	..	..	18	R.	5	3	7	3	..	..	18	5	3	6	2	..	..	16
									W.	5	3	6	3	..	..	17							
									A.	5	3	7	2	..	..	17							
Totnes - - -	76	18	9	10	9	..	..	46	R.	16	9	10	8	..	..	43	16	5	9	4	..	..	34
									W.	18	5	9	5	..	..	37							
									A.	18	8	9	9	..	..	44							

* 58 boys, 52 girls.

Dr Clutterbuck's Report.

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Cornwall.																							
Austel, St. - -	57	13	10	7	5	5	1	41	R.	6	7	7	5	3	0	28	6	3	5	2	1	0	17
									W.	13	6	5	3	3	1	31							
									A.	13	5	6	3	4	1	32							
Bodmin - - -	50	10	6	4	..	1	..	21	R.	10	6	4	..	1	..	21	10	6	3	..	1	..	20
									W.	10	6	4	..	1	..	21							
									A.	10	6	3	..	1	..	20							
Camelford - -	18	3	1	3	3	1	..	11	R.	3	1	3	3	1	..	11	3	1	3	3	1	..	11
									W.	3	1	3	3	1	..	11							
									A.	3	1	3	3	1	..	11							
Columb, St. - -	37	8	5	1	5	2	..	21	R.	8	5	1	5	2	..	21	8	5	1	5	1	..	20
									W.	8	5	1	5	2	..	21							
									A.	8	5	1	5	1	..	20							
Falmouth - -	32	3	6	5	3	3	..	20	R.	2	5	5	3	2	..	17	2	2	3	2	2	..	11
									W.	3	3	3	3	3	..	15							
									A.	3	4	5	2	2	..	16							
Germans, St. - -	40	6		8	..	..	..	23	R.	5	9	8	..	..	..	22	5	9	8	..	..	..	22
									W.	6	9	8	..	..	..	22							
									A.	6	9	8	..	..	..	23							
Helston - - -	45	3	9	4	1	..	..	17	R.	3	9	4	1	..	..	17	3	4	2	0	..	..	9
									W.	3	4	3	1	..	..	11							
									A.	3	7	2	1	..	..	12							
Launceston - -	20	5	4	4	..	..	..	13	R.	4	4	4	..	..	..	12	4	3	2	..	..	..	9
									W.	5	4	4	..	..	..	13							
									A.	5	3	2	..	..	..	10							
Liskeard - -	45	5	10	11	1	1	..	28	R.	4	10	11	1	1	..	27	4	9	11	1	1	..	26
									W.	5	10	11	1	1	..	28							
									A.	5	9	11	1	1	..	27							

TABLE II.—*continued.*

Union.	No. on Books on day of Inspection.	Number *presented* in Standards							*Passed* in Standards								Passed in *All* subjects, Standards						
		I.	II.	III.	IV.	V.	VI.	Total.	—	I.	II.	III.	IV.	V.	VI.	Total.	I.	II.	III.	IV.	V.	VI.	Total.
Cornwall—*cont.*																							
Penzance	28	5	5	3	..	..	..	13	R.	3	5	3	..	..	..	11	3	3	3	..	..	..	9
									W.	5	4	3	..	..	..	12							
									A.	5	3	3	..	..	..	11							
Redruth	46	8	5	10	3	..	..	26	R.	7	5	10	3	..	..	25	7	1	8	3	..	..	19
									W.	8	1	9	3	..	..	21							
									A.	8	4	8	3	..	..	23							
Stratton	21	3	..	..	2	..	..	5	R.	2	..	..	2	..	..	4	2	..	..	0	..	..	2
									W.	3	..	..	1	..	..	4							
									A.	3	..	..	0	..	..	3							
Truro	39	6	7	9	2	..	..	24	R.	1	7	9	2	..	..	19	1	2	7	1	..	..	11
									W.	6	2	9	1	..	..	18							
									A.	6	7	7	2	..	..	22							
Pembroke.																							
Haverfordwest	67	13	8	12	6	5	..	44	R.	10	8	12	6	4	..	40	10	1	7	4	4	..	26
									W.	13	3	11	4	4	..	35							
									A.	13	2	8	6	5	..	34							
Narberth	20	3	2	6	4	..	..	15	R.	2	2	6	4	..	..	14	2	0	4	3	..	..	9
									W.	3	0	4	4	..	..	11							
									A.	3	2	6	3	..	..	14							
Pembroke	27	5	4	5	6	..	..	20	R.	4	4	5	5	..	..	18	4	4	2	2	..	..	12
									W.	5	4	2	4	..	..	15							
									A.	5	4	4	2	..	..	15							
Carmarthen.																							
Llandilo Fawr	11	1	4	2	..	..	..	7	R.	0	4	2	..	..	..	6	0	4	2	..	..	..	6
									W.	1	4	2	..	..	..	7							
									A.	0	4	2	..	..	..	6							
Llanelly	28	2	6	5	1	2	..	16	R.	1	4	5	1	1	..	12	0	3	1	1	0	..	5
									W.	2	3	1	1	0	..	7							
									A.	0	4	1	1	2	..	8							

Dr. Clutterbuck's Report.

No. 35.

Mr. Holgate's Report.

EDUCATION of PAUPER CHILDREN in the METROPOLITAN DISTRICT. —REPORT for the year 1882, by WYNDHAM HOLGATE, Esq., Inspector of Poor Law Schools.

SIR, 30th *January* 1883.

As the opening of another year renders it necessary for me to send in a report of the proceedings of the one just ended, it occurs to me that it may be interesting to you, on your accession to office as President of the Local Government Board, if I take the opportunity of recording, somewhat in detail, the area, amount, and results of the duties which fall to my lot as inspector of Poor Law Schools for the Metropolitan district.

Area of district.

This district includes the whole of Essex, Kent, Middlesex, Surrey, and Sussex, one or two unions in Cambridgeshire and Suffolk, owing to their containing parishes within the adjoining county of Essex, and the major part of Berkshire and Hampshire.

Number and classification of unions.

The total number of unions in this area is 143, and of these the following 24 have been formed into school districts, under 7 & 8 Vict. cap. 101.

City of London S. Saviour's	Central London School District.
Camberwell Greenwich S. Olaves Woolwich Stepney	South Metropolitan School District.
Croydon Lewisham Wandsworth and Clapham	North Surrey School District.*
Alton Farnham Hartley Wintney	Farnham and Hartley Wintney School District.
Reading Wokingham	Reading and Wokingham School District.
Fulham Paddington S. George's	West London School District.
Poplar Whitechapel	Forest Gate School District.
Kensington Chelsea	Kensington and Chelsea School District.
Hackney Shoreditch	Brentwood School District.

Separate schools, either at some miles distance from the workhouse, or on the grounds surrounding it, have been built by the following 24 unions :—Cookham ; West Ham ; Maidstone ; Sheppey : Tonbridge ; Bethnal Green ; Brentford ; Edmonton ; St.George-in-the-East ; Hendon ; Holborn ; Islington ; S. Marylebone ; Mile End Old Town ; S. Pancras ; The Strand ; Westminster ; Portsea Island ; Southampton ; Lambeth ; Brighton ; East Grinstead ; Lewes ; and Petworth.

* Richmond Union has been recently removed from this school district, and the guardians are now adopting the boarding-out order and other means for the education of their pauper children.

Mr. Holgate's Report.

The following 34 unions have adopted (either entirely, or for the elder boys or girls, or both) the system of sending the workhouse children out to public elementary schools in the immediate neighbourhood, and placing them under the charge of industrial trainers or caretakers on their return from school:—Easthampstead; Hungerford; Windsor; Billericay; Epping; Halstead; Orsett; Rochford; Romford; Saffron Walden; Canterbury; Dartford; Hoo; Malling; Milton; Romney Marsh; Tenterden; Andover; Catherington; Havant; Hursley; Kingsclere; Petersfield; Romsey; Whitchurch; Sudbury; Guildford; Hambledon; Kingston; Chichester; Horsham; Newhaven; Steyning; and West Firle.

The remaining unions in the district either still maintain the old form of school incorporated in the workhouse building, under the charge of one or more teachers according to the number of the children; or they send their few children to the schools of some other union which has spare school accommodation, under 14 & 15 Vict. cap. 105, s. 6. and 29 & 30 Vict. cap. 113, s. 16.

The training ship "Exmouth," with accommodation for 600 boys selected entirely from metropolitan unions, is also under my inspection; and several schools and institutions (chiefly for Roman Catholics) certified under 25 & 26 Vict. c. 43, many of them of increasing size and importance, and maintaining a very large number of children from metropolitan unions are from time to time visited and examined by me.

Number of children on the books, and examined.

The actual number of children on the books of the various classes of schools above alluded to, at my inspections during the year 1882 has been:—8,278 boys, 6,779 girls, and 2,266 infants in separate departments, making a total of 17,323 children; and the number of miles travelled by me in the same period in carrying out these visits has been 12,184.

Deducting from this total of 17,323 children the 2,266 infants in separate departments (who are but rarely forward enough to be placed in any definite standard), some 2,000 children in certified schools (for whose full inspection and examination no official provision has as yet, I regret to say, been made), and (say) 1,057 for sick children and others unavoidably absent, and there remain 12,000 boys and girls examined by me in 1882 according to the standards of the New Code, with the following results, as shown by the official examination schedules now in use in Poor Law Schools under the General Order of 3rd April 1878:—

Results of examination officially recorded.

Standard.	Number presented.	Failed to pass in all three Subjects.	
VI.	180	41	
V.	756	233	
IV.	1,650	578	
III.	2,126	662	
II.	2,334	493	
I.	2,258	413	
Primer Class	1,473	—	Not individually examined.
	10,777	2,420	
* See Note	1,223		
	12,000		

* These 1,223 children represent the newcomers, the dunces, and the semi-imbecile, who were unable to do more than (at the utmost) form letters and figures on slates, and pick out letters from the alphabet, or possibly spell single syllables from a large type-reading card.

Mr. Holgate's Report.

Remarks upon results of examinations.

In placing these results before you I purposely forbear from making any comparison with those obtained in any other class of elementary schools, as, in my opinion, there are many circumstances which oblige Poor Law Schools to be treated as a class entirely by themselves;—such, for instance, as the frequent inferiority of the material on which to work, the endeavour to carry out a system of industrial training together with that of intellectual instruction, thereby reducing the number of school attendances to a minimum, and the fact that hitherto the teachers employed (though most praiseworthy as a class for their persevering efforts to perform their various and never-ceasing duties) have not been universally required to produce certificates of special training on their appointment, as those holding office in other public elementary schools are obliged to do.

I would, however, remark, that the numbers presented for examination in standards VI. and V. might have been considerably larger, did I not always endeavour to make my teachers feel that a thorough intelligent knowledge of the amount of reading, writing, and arithmetic required in standard IV. (that being generally accepted throughout the country as the necessary test of a child's qualification for earning its living, when of proper age), will prove of more lasting value, than the mere superficial cram, which may enable them just to push a child through the inspector's examination in standards V. or VI., the whole of which will have been forgotten within three months of his visit.

I have been the more desirous to press this view upon my teachers because I feel confident that material benefit might be obtained in the industrial training given to the children, if when they have passed the standard required for the certificate of proficiency, but are still too young or of insufficient physical strength to be sent into the world to gain a livelihood, they could be employed mainly in works of industry, such occasional attendance at school being given during the week as would be sufficient to maintain the intellectual knowledge which they had already acquired. To enable this course of proceeding, however, to be legally adopted, it would appear that a special proviso to this effect is required to be added to the existing article 114 of the General Consolidated Order of 1847, and to a similar article embodied in the special regulations issued to all the school districts; such additional proviso being, in my opinion, far preferable to the omission of the specified number of hours for school instruction at present contained in these articles, as has been also suggested. If this alteration be sanctioned by the Local Government Board, the passed-out girls would be able to learn thoroughly and practically the general duties appertaining to the work of a domestic servant, and the younger ones would not (as now is too often the case) be put to labour which they are physically incapable of doing efficiently, and which they consequently get into the habit of doing imperfectly and unwillingly; whilst the passed-out boys would gain such sufficient knowledge of a trade as to be of real and immediate service to any master who might take them, and very different from the mere slop-work which is in most cases at present all that they attain to. A further advantage would be arrived at in enabling the younger children (and also those who enter the schools older, but absolutely ignorant) to attend school more frequently and with certain regularity, and thus more rapidly to gain the certificate of proficiency, for nothing so much interferes with real progress in intellectual work as irregular attendance at school.

Proviso to Art. 114 Gen. Con. Order required.

The after-life of children educated in Poor Law Schools, and the immediate result of the systems adopted have been recently the subject of controversy, and I so frequently see statements put forward which

show that the persons making them are imperfectly acquainted with the working of these establishments in my district, that I am glad on this occasion to bring before you statistics in reference to some of them, which, though "*registered by officials*," * will, I trust, not be deemed unworthy of consideration. *Mr. Holgate's Report.*

The first return to which I ask your attention is one furnished me by Captain Burchier, R.N., Superintendent of the training ship "Exmouth," showing in detail the work done by that ship from its establishment in 1876 up to December 31st, 1882. Returns from training ship "Exmouth."

Training Ship "Exmouth." Grays, Essex. December 31, 1882.

	1876.	1877.	1878.	1879.	1880.	1881.	1882.	Totals.
Boys admitted - - -	194	494	188	210	289	226	340	1,941
Boys discharged to Royal Navy.	1	6	1	8	72	85	155	328
Boys discharged to mercantile marine, out of whom 32 were enrolled in the 3rd class Royal Naval Reserve.	53	19	126	115	105	107	109	634
Boys discharged to army as musicians.	9	11	9	31	17	27	46	150
Discharged to situations, 3 of whom subsequently went to sea.	1	—	2	—	3	—	—	6
Boys discharged to their respective unions for various reasons by order of the Boards of Guardians of the unions and parishes.	21	22	43	30	59	40	27	242
Boys absconded, 3 of whom were recovered.	—	1	4	—	2	3	—	10
Boys died - - -	—	—	2	1	—	4	1	8
Boys discharged each year -	85	59	187	185	258	266	338	1,378

Boys discharged - - - - -	1,378
Remaining under training December 31st, 1882 - -	563
Total admitted - - -	1,941

The next Table is a complete list of the boys and girls sent out as apprentices or servants from the separate schools of the Westminster Union situate at S. James' Road, Tooting, during the five years ended September 30th, 1882. This list has been prepared for me with great care by Mr. F. Purkiss, who has been superintendent during that period, he and Mrs. Purkiss, the matron, having previously filled the posts of schoolmaster and schoolmistress in the same schools; I may add that, if verification of the remarks were needed, it is fully obtained from letters in my possession from the present employers of the children. Returns from Westminster Union Schools.

* See letter to "The Times," December 28, 1882, from the Rev. Brooke Lambert.

Mr. Holgate's Report.

BOYS and GIRLS who have left the WESTMINSTER UNION SCHOOLS during the five years ended September 30, 1882.

Date of leaving.	Name.	Age.	Remarks.
1877.			
July 15	M. B. -	13	Sent to Leeds as housemaid. Her sister is living at the same place as cook, and was formerly a girl in the school when Mrs. Purkiss was schoolmistress. They are both still doing well.
Aug. 30	J. B. -	14	Bound apprentice to the trade of a baker. Was always a good boy, fond of gardening, and made himself very useful. He is now a fine young man, and doing well at his trade in Newington Butts.
Sept. 1	S. B. -	14	Was sent on trial before being apprentice to a grocer. I afterwards found he was not living with his supposed master, but with another person, who was endeavouring to get up a business connection at Tooting. This was considered very unsatisfactory, and the boy was taken away, and was bound to a blacksmith; he was doing well at his trade in July last.
Oct. 10	C. D. -	15	Sent out as a page, and is still doing well.
Oct. 22	E. P. -	13	This boy was taken as clerk by a person in Cursitor Street, Chancery Lane, who after a very short time accused him of stealing money. He was returned to the workhouse, and sent to the training ship "Exmouth." He fretted a great deal, and was afterwards sent to Highate Infirmary, where he died of consumption. He frequently wrote to me, always begging me never to believe he was guilty. I never knew a more truthful boy, and I still believe he was strictly honest.
Nov. 7	F. M. -	14	Enlisted into the band of the 11th Brigade Royal Artillery, Sheerness, where he still remains doing well.
Nov. 21	G. A. C. -	15	Enlisted into the band of the 11th Brigade Royal Artillery, Sheerness, where he still remains doing well.
1878.			
Jan. 14	E. B. -	14	Sent out as page, and is still with the same master as coachman; is a fine young man, and well conducted.
Feb. 7	M. A. D. -	13	Sent out as housemaid to a lady who has another of our girls as cook. Both are still doing well.
Feb. 18	J. M. -	15	Bound apprentice to a builder, and is getting on well at his trade under the same master.
Feb. 18	G. M. -	14	Brother of the above; was sent on trial to a baker next door to where his brother lived. The boys did not agree, and their friends took G. M. away, and I hear, though I have not seen him since, that he is doing very well with a baker at Wandsworth.
Feb. 25	G. C. -	15	Was sent out as page, but did not do well; he then obtained a situation near these schools as under gardener, where he still remains, doing well.
Feb. 27	G. H. -	15	Sent out as a butcher's boy, near the schools; a rough boy, but hard-working; is still at the same place.

Mr. Holgate's Report.

Date of leaving.	Name.	Age.	Remarks.
1878.			
April 8	S. C. -	14	Sent out as a general servant; a strong willing girl, but slovenly in her habits. Left her place to get married, but I have heard nothing of her for the past year.
April 16	C. B. -	15	Sent out as nursemaid: has since taken a place as housemaid, and is doing well.
Aug. 12	A. L. -	15	Sent out as general servant, and is now a fine woman, still in service, and doing well.
Sept. 12	R. B. -	14	Sent out as errand-boy to a person in the City Road; left his place and obtained another; saw him on 30th July; he told me he was then at work for a grocer at Camberwell.
Sept. 12	F. C. -	14	Bound apprentice to a bootmaker; is still at the same place, doing well at his trade.
Oct. 4	W. H. -	16	Bound apprentice to a harness maker; is still in the same place, doing well at his trade, and giving every satisfaction.
Oct. 18	H. T. -	15	Bound apprentice to a confectioner; still in the same place, doing well.
Oct. 21	W. P. -	15	Bound apprentice to a bootmaker. Summoned his master for beating him. His master was sent to prison for one month. The boy then left his place, and I have not been able to find him since.
Dec. 21	I. L. -	15	Sent out as housemaid. Her friends took her away. But she is now again in service, and doing well.
1879.			
Feb. 19	M. B. -	15	Sent out as cook; is still in service, and, although she has made several changes, is doing well.
May 5	H. R. -	15	Sent out as general servant. Friends took her away from her situation.
May 24	A. B. -	15	Sent out as housemaid; has since left her situation, and is keeping house for her brother, who is a respectable tradesman.
May 26	J. H. -	14	Went on trial with a blacksmith near the school, but did not do well; is now living with a milkman.
July 9	L. P. -	14	Sent out as general servant; has changed her place several times, and given a great deal of trouble, but is now doing well.
Aug. 6	A. G. -	14	Bound apprentice to a confectioner; is now a fine young man, in the same situation and doing well.
Aug. 25	C. T. -	15	Sent out as page; is still with the same master, who is much attached to him, and gives him a most excellent character.
Aug. 23	E. C. -	14	Sent out as a general servant; has not done well, and her present mistress complains that she is very obstinate.
Aug. 26	W. A. -	14	Bound apprentice to a veterinary surgeon, who had previously his brother. Boths lads are still with the same master, and doing well.
Aug. 26	H. B. -	14	Was a grocer's assistant, but left that situation for another, and I am at present unable to trace him.
Sept. 1	J. L. -	14	Bound apprentice to a tailor; is still in the same situation, and gives every satisfaction.

Mr. Holgate's Report.

Date of leaving.	Name.	Age.	Remarks.
1879.			
Nov. 11	J. R. -	14	Sent out as page. His mistress was so well pleased with him, that she found him a better situation in a good family, and has taken another boy from the schools in his place (see post, A. M., June 14, 1882).
Nov. 19	T. D. -	14	Sent out as page and assistant gardener. I frequently see this lad. He is in the same situation and doing well.
1880.			
Jan. 26	S. D. -	14	Bound apprentice to a tailor, but was treated very badly by his master, and is now living with his friends.
May 3	W. E. -	15	Bound apprentice to a hair-dresser, is still in the same situation, and is well conducted.
May 6	C. D. -	15	Sent out as general servant; has suffered much from ill-health during the past six months; but she is such an excellent servant, that her mistress will not hear of parting with her.
May 21	H. B. -	15	Bound apprentice to a corn merchant; is still in the same situation, but is very troublesome to his master.
May 31	M. A. Y. -	15	Sent out as general servant; was returned to the workhouse, and, after being there a few days, obtained another situation, and we have heard nothing of her since.
Oct. 7	H. W. -	14	Sent out as page; left that situation about a month ago for a better one, and is doing well.
Oct. 7	W. F. -	15	Bound apprentice to a corn merchant; is still in same situation, and doing well.
Oct. 9	H. B. -	16	Sent out as general servant; after staying in this place a year and a half, obtained another, and at the present time is doing well.
Oct. 23	W. D. -	15	Enlisted into the band of the Royal Artillery, Sheerness, and is getting on well.
Oct. 23	T. L. -	14	Enlisted into the band of the Royal Artillery, Sheerness; is now in the band of the Royal Artillery, Woolwich.
Oct. 23	W. G. -	14	Went on trial before being bound apprentice to a turner. His mother found him out, and took him from his situation to live with her in Wardour Street.
Oct. 29	A. G. -	14	Bound apprentice to a plumber, and is giving his master every satisfaction.
Nov. 15	F. G. -	14	Bound apprentice to a harness maker, and is doing so well that his master's wife has taken his sister as servant (see post, A. G., Aug. 7, 1882).
Nov. 23	M. W. -	14	Sent out as housemaid to a lady, who has another of our girls as cook. Both are still in the same situations, and giving every satisfaction.
1881.			
Jan. 1	E. D.	14	Sent out to a greengrocer, who treated him badly. I then found him a place as page, and he is now in service at the Junior United Service Club, Waterloo Place.
Jan. 1	H. S. -	14	Sent out as page; has since left his situation for another, and I am not able to trace him.
Jan. 17	E. W. -	14	Sent out as page; is now living with his friends, who took him from his situation.
Feb. 7	J. L. -	14	Sent out as page; is still doing well.
Mar. 9	C. D.	14	Sent out as housemaid; is still in same situation, and doing very well.

Mr. Holgate's Report.

Date of leaving.	Name.	Age.	Remarks.
1881.			
Mar. 30	C. H. -	15	Sent out as general servant, but is now in hospital suffering from spinal disease.
April 14	L. B. -	15	Sent out as general servant; is in same situation, and doing fairly well.
April 26	M. O'B. -	14	Sent out as general servant, and after staying 16 months in same situation obtained another, and is doing well.
May 19	A. E. -	14	Sent out as page; has since obtained another situation, and I am at present unable to trace him.
June 20	E. T. -	14	Sent out as nursemaid. Her mistress has since raised her wages to 10*l.* per annum as housemaid; she is still in same place.
July 20	C. P. -	14	This girl has made an excellent housemaid; is in same situation, and doing very well.
July 28	M. W. -	14	This girl has made an excellent housemaid; is in same situation, and doing exceedingly well.
July 29	J. R. -	14	Sent out as general servant; but has since left her situation to live with a married sister.
Sept. 8	G. E. -	14	Bound apprentice to a wheelwright and carpenter, and is doing well.
Nov. 25	A. B. -	14	Bound apprentice to a carver and gilder, and gives his master every satisfaction.
1882.			
Mar. 8	A. G. -	14	Sent out as general servant; left her first place to take another nearer her mother, and is doing very well at present.
Mar. 11	C. L. -	14	Sent out as housemaid; is in the same situation, and doing well.
Mar. 15	M. M. -	14	An exceedingly good girl, beloved by everyone, was very willing to lend a helping hand in any part of this establishment, and when leaving took with her many presents from officers and children as tokens of their high esteem; sent out as housemaid, is still in same situation, and her mistress speaks highly of her.
Mar. 27	C. N. -	14	Sent out as nursemaid; has since changed her situation, and is doing well as housemaid.
Mar. 30	J. B. -	14	Bound apprentice to a wheelwright and carpenter, and is doing very well.
April 16	A. F. -	14	Sent out as general servant; has changed her situation, and is now doing fairly well.
April 6	M. S. -	14	Bound apprentice to a confectioner. His master expresses himself as much pleased with him.
May 20	C. T. -	14	Sent out as general servant; has left her first situation to take service as housemaid in a family where her sister is cook.
June 6	A. M. -	14	Sent out as page, and his mistress gives him a very high character (see ante, J. R., Nov. 11, 1879).
May 12	E. B. -	14	Bound apprentice to a confectioner, who is very much pleased with him, and the boy is getting on well.
June 16	E. H. -	14	Sent out as housemaid; is giving every satisfaction, and doing well.
June 26	S. C. -	14	Sent out as housemaid; doing well, and makes a good servant.
July 14	C. H. -	14	Sent out as a housemaid, and is doing exceedingly well. Her mistress speaks of her in the highest terms.

Mr. Holgate's Report.

Date of leaving.	Name.	Age.	Remarks.
1882.			
July 14	W. P. -	14	Sent out as assistant in a large draper's establishment; has an excellent master, who speaks well of the boy; frequently visits the schools.
Aug. 7	A. G. -	14	The brother of this girl has conducted himself so well, that his mistress determined to take his sister to live with them. The brother and sister are much attached to each other, and I am certain they have a very comfortable home (see ante, F. G., Nov. 15, 1880).
Aug. 8	J. H. -	14	Bound apprentice to a bootmaker, and gives his master much satisfaction.
Sept. 27	M. L. -	16	Sent out as a general servant, who writes to say she is well satisfied with the girl.

"The Matron occasionally appoints a day, when all girls who have left the "schools can meet here; and at such times it is very interesting to note their "general respectable appearance, and to hear their experience of life away from the "schools.

"(Signed) F. PURKISS,
"Superintendent and Headmaster."

If proof be needed that the good results thus shown to be obtained in early life at these schools are not lost in later years, and that the recipients of the benefits remember with gratitude and continue to value highly the great advantages therein afforded, I may mention that within the last few days a master-tradesman, educated in the Plashet Schools of the S. George-in-the-East Workhouse, and now occupying a good position in life, has written to the superintendent asking to be supplied with four boys from his old school for his business; and I am sure that the following letter, from an old band-boy at the Islington Schools to the superintendent there, will be read with interest and approval by all into whose hands this report may chance to come :—

St. George-in-the-East Schools.

Islington Schools.

H. M's 1st Battalion Worcester Regiment,
Nasirabad, Rajputana, N.W.P. East Indies,
13th March 1882.

Dear respected Sir,

Once again after a very long delay, I again venture to write you a letter from this far-off land; hoping that it will find you, Mrs. Cornish,* Mr. Cornish, junr. (or as we were used to call him Master James) and Miss Henderson† all well, and still working, as was always your aim, for the welfare and instruction of those unfortunates and outcasts of our public parishes whose fate has placed them under you, and which, as regards myself, I have ever looked back on with feelings of gratefulness and thanksgiving to Almighty God, for having placed me under the care of such wise and able teachers in my young days as yourself and good motherly Mrs. Cornish, whose care of us youngsters in my time was motherly and tender in the extreme. I have heartily thanked you for that care before in my letters to you, but it would not be out of place (at any rate in my opinion) if I composed a letter consisting of nothing else but thanks, so allow me to thank you again and again.

I am glad to say I am at present enjoying the best of health, and have been for a long time; although when we first came out here I had a great deal of very severe sickness: in fact so did all our regiment. We lost a great many young soldiers, who were not strong enough to stand against the heat and various diseases of this country: M . . . and H . . . whom I dare say you still recollect, suffered even far worse than I did. I attribute my later good fortune as regards health to total abstinence, for I have seen by experience that any man who leaves rum or heavy liquor alone is the best off in every way, health, pocket, comfort, &c.

* Mrs. Cornish was matron.
† Miss Henderson was schoolmistress in the writer's time.

I have been a total abstainer for 2½ years now, and at any rate I have not suffered from it.

What mostly prompted me to write now was in this way: M. . . . . and myself were talking about old times, and we both fell into the old school theme, and both expressed wonder and wishes to know how all of you were getting on at the old place, so I determined to write and try and find out: so I have plucked up courage again and wrote, hoping, however, that it meets your approbation. I trust a favourable answer written when you have leisure, will be received by one of us. J. H. . . . is still a drummer, W. . . , I am sorry to say, is dead, he did not die in India, but at the depôt in W. . . . on the 18th July 1880. I am given to understand that he was a fine-looking soldier, standing 6 ft. 3 in. in height and measuring 40 inches in chest measurement. He died from consumption, brought on by a severe cold which he neglected. We received the news out here with great sorrow.

M . . . . is a regimental staff-serjeant, viz., "Hospital Serjeant," I am corporal of the drums, and could be drum-major if I choose, that is also a staff-serjeant's position, but I do not care for it. I have been examined and I have been found fully qualified with excellent marks, viz., 279 out of a possible 325 for an entrance into the Roorkee Civil Engineering College; I am now daily looking out for the General Orders to let me know how I stand according to the number of vacancies,* for you most know that there are only a few that can get in. I had of course to compete with men from all parts of India and Burmah, but I have received a certificate to state, although I may not be successful in obtaining an entrance, I am fully qualified and may be at any time required for public service. The examination consisted of questions in practical and demonstrative geometry (Euclid. I., II., III.). Todhunter's Mensuration, Barnard Smith's Arithmetic and Algebra to square and cube root, model and perspective drawing, building materials, Hindustani (I was the first to pass this in the regiment, 27 failed out of 28), 12 questions on canal fitting, irrigation, bridges, roads, and railway cutting. M . . . . is trying to get an appointment on the unattached staff of H.M. Bombay Army, and I think he will succeed. It is nearly time we were thinking of doing something, for our period of army service has nearly expired. H. . . . . has lost 3 years service through two desertions, so M. . . . . and myself will finish up with the Army in August, it being 11 years and 7 months since we were inmates of the old school.

We have seen many changes and curious sights, many high mountains, deep and wide rivers, great plains and deserts, and marched across them only last December, yet for all these many changes from one scene to another our youngster days and scenes of long ago stand prominent, and they are continually before us like monitors of the past: the old swing, garden, the children's sermon on the last Sunday of every month at St. Mark's Church, Christmas festivals, they all crowd themselves as it were into our thoughts, and I assure you many and many are the long yarns we have spun together followed by periods of silence as we think of those lost days of school times. We, in India, shut out from all the rest of the world, are apt to think very differently of different subjects to our comrades at home. M. . . . and I are still the great friends we always were; *never* (I am sure of it, too) have we had an angry word, and no one goes about closer than we do, and have done for all these years. He was my chum or chief comrade in the school, and so he has been in the army, and I know this, sir, that when I express these feelings to you, I write for him also, for he always reads these letters, and approves of what I say. Of course we, as well as all other boys at the time used to think your ways often very harsh, especially when we got "a hander," as we used to call it. But we as men come to the conclusion that if every boy had the same careful training, and really fond old master and mistress that we had, there would be many brighter and more religious men in and for old England than there are at present. As for the corrections we received then, they were far from being harsh except to our feelings outwardly; they were really mild, and only administered for our good, if we were wise enough to think and reflect upon them. And now you are getting past the middle of life it may be consolation to you to think that, at any rate, some of your old boys who are now men, aye, and strong able men, too, still look at you with the tenderest of regards and never speak of you only as the good old gaffer (excuse the rough nickname, but soldiers speak rough sometimes), so God bless you, sir, once more.

During my residence in India I have corresponded with many old schoolmates, who have not perhaps written to you, to wit, D. D. . . . and G. B. . . . of the 2nd, 11th Regiment: B. . . . was invalided home from Poona, and I have heard that he is now at rest; D. . . . left the 11th in Kandahar with his time finished, went home, and is now I believe military Scripture reader, either in Bristol or Taunton. When in India I received some very beautiful Christian-like letters from him. I. . . .

* He passed successfully.

Mr. Holgate's Report.

L. . . . 1st, 12th; A. C. . . .; J. K. . . .; and G. K. . . ., all of the 1st and 5th, were all through the Affghan campaign; L. . . . through both expeditions. T. L. . . . volunteered from the 41st to the 24th, and was all through the thick of the Zulu war. The 41st with F. K. . . . and J. S. . . .; and also the 91st, with several Islington boys, are at Natal still. There are still several in India whose names, I dare say, you have almost forgotten; the 102nd is in Ceylon with 3, the 46th at Gibraltar with 2 or 4, the 1st Royal Scots at Barbadoes with 2; so you see the boys of Islington School are greatly scattered about the world, and I do not think there is one but what can bring fond recollections of old times, if they choose.

I should like to know if any boy during the Christmas entertainments gone by has attempted the scene in King John with you since I took the part of Prince Arthur in 1869, and you as Hubert. I almost know it now, also Web Spinner and King Bruce of Scotland; all in the same night!

Well, sir, I think I had better bring this long letter to a close (it is not much good writing short letters from India), hoping that you will excuse my taking up so much of your valuable time, and hoping and looking forward to a pleasant and successful future, when I shall have the happiness of meeting you once more on earth, if God wills it; at any rate let us hope in Heaven. Kindly give our regards to your family and our friend Miss Henderson.

God bless you, and the old school, too, and may the entrance into the latter be the means of saving many poor children from vice and wickedness, and starting them again into the world faithful soldiers and servants of Christ unto their lives' end, and so continue until God gathers his jewels, and will spare them as a man spareth his own son that serveth him.

Farewell,

From your's truly,
(Signed) H. L. J.*

I will conclude this report with some remarks, in which I fully concur, which appeared in a Brighton newspaper a few days ago, in reference to a highly successful and gratifying Christmas meeting, at which some 60 boys, varying in age from 14 to 24 years, who had been educated at the Warren Farm Schools of the Brighton Union during the chaplaincy of the Reverend W. A. Tooth, and are now earning their living, had gathered together at his invitation as the donor of the entertainment:—

Brighton Union Warren Farm Schools.

" There are, or have been, those who have questioned the wisdom of " providing, and doubted the efficient administration of such institutions " as the Warren Farm Schools of this town. All doubts and question- " ings would have been removed could those who had them have been " present at this gathering. The bright intelligence and contentment " seen in the faces, the proof of good hard work manifest in most of " the hands, the evident marks of well-being and well-doing borne by " nearly all, together with the tokens of *self*-respect as well as regard " for others, which were abundantly manifest, gave clear testimony to " the good results which the system, when properly worked, may be " made to produce. We say 'when properly worked,' because we feel " that, for such a result to be arrived at, it is necessary that those who " are responsible for the management should be men who know what " they have to do, and have the qualifications needful to the doing of " it. Such men, when found, are worthy of all consideration; and " looked at in every light, we think the gathering to which we refer is " one on which we may congratulate our fellow townsmen, and express " the hope that it may some day be repeated on a larger scale."

I have, &c.
WYNDHAM HOLGATE.

To
The Right Hon. Sir Charles Dilke, Bart., M.P.,
President of the Local Government Board.

* Mr. Cornish, to whom this letter was addressed, died, I regret to say, on February 20th, 1883, after my Report was written.

No. 36.

Education of Pauper Children in the Midland and Eastern District.—Report for the Year 1882, by Byam Davies, Esq., Inspector of Poor Law Schools.

Sir, *January* 1883.

Mr. Davies' Report.

In my report for the past year, I shall hope to show that some slight educational progress has been made in my district, and that, although there are still a considerable number of schools, which are by no means in such a state as could be wished, the number of unsatisfactory schools is decreasing, and I have reason to hope will continue to decrease.

As far as the larger schools are concerned, there ought I think to be no great difficulty in obtaining satisfactory results; but in the small schools, which form the majority, it is not so easy, as it frequently happens, that at my inspection, I find a great part of the children so young as to have barely learnt their letters, or to have been so short a time in the school as to afford no chance to the teacher to show what his or her power of teaching may be; more especially as many of the new arrivals, being children of tramps, have never been at school before, though possibly 12 or even 14 years of age; and this latter circumstance cannot fail to be most discouraging to the teachers. Another thing that seems to me to tell against the small schools especially, is the little interest in them displayed by the managers; as in some unions, except the chaplain, no one, as I am told, visits the school from one year's end to the other, and the work is allowed to be carried on without any supervision, and consequently without that approval, which is such an encouragement to a good teacher, or the fear of censure, which would tend to keep an indifferent one up to the mark; and as no one is aware of the real state of the school, if a good report has previously been given by the inspector, it is expected as a matter of course, and the greatest surprise is manifested should the report be adverse. Even when the chaplain constantly visits the school, it sometimes happens that he is not allowed in any way to interfere in its management; and is not listened to if he makes any suggestions to the board of guardians. It must not be supposed that this state of things is by any means universal, even in the small schools in country unions, some of which are carefully watched by the managers and admirably carried on. If the guardians could only be brought to understand, that the repayment out of the Parliamentary Grant was entirely dependent on the state of the schools, they would at once see, that it was to the interest of the ratepayers, as well as of the children, always to appoint thoroughly efficient teachers, who would be sure to earn on their certificates enough at least to cover their salaries, and by imparting a proper education to the children, give them an improved chance of making their own way in the world, instead of becoming a permanent burden on their respective parishes.

Taking the broad results of my inspections, I have, between January 1st and December 31st, 1882, visited 100 unions and (counting as separate schools, the boys, girls, and infants, when each have their own distinct teachers) I have inspected 138 schools, of which 31 show improvement, 30 have more or less fallen off, 69 have remained stationary, 6 I had not previously inspected, and 2 were too small to count

Mr. Davies' Report.

for anything. These figures at first sight, do not perhaps appear altogether satisfactory; but I think that I can on the whole show that the balance is on the side of improvement. In the great majority of cases when I found the schools stationary, they have continued to be in a satisfactory state, and in some cases are really in a high state of efficiency. Among the 31 schools, which show improvement, there are 9 which were in a most unsatisfactory state, and are now going on well; while of those that have fallen off, only 5 have become bad from having been good, and some of these in consequence of a change of teachers, or an outbreak of illness, which has, wholly or in part, closed the school for some considerable time. Of the others, some, being still under the care of inefficient teachers, have gone from bad to worse, and the remainder merely are not quite so good as they were last year, but are by no means to be considered as being in an unsatisfactory state.

The results of my examinations will be found in the following table:—

Standard.	Children presented for examination.	Passed in		
		Reading.	Writing.	Arithmetic.
I.	837	629	573	487
II.	897	801	665	679
III.	762	712	510	519
IV.	575	527	417	488
V.	355	343	278	243
VI.	105	102	96	83
TOTAL	3,531	3,114	2,539	2,499

Although I have passed a larger proportion of children in reading, than either in writing, or arithmetic, I have done so, not because I consider that they in fact read well, or that they understand what they read to the extent that I should wish; but I have been obliged to take the quality of the reading as I have found it, and though I hope, by degrees, to instill into the teachers minds the extreme importance of proper instruction in reading, if I had, up to now, only passed those children, with whose reading I was perfectly satisfied, the number of failures would have been considerably larger. I have considered that in acting thus, I was consulting the best interests of the children, as they have the same chance of improving in reading in every part of the school; and my great object has been, provided that they satisfied me in writing and arithmetic, to get them, as soon as possible, into the higher standards, that they may obtain their certificates of proficiency, which qualify them for going out to service, when fit places can be found for them; but I always expect to find an improved, and more intelligent style of reading, as the children rise in the school. In many schools I have found a great improvement in the handwriting, and, as a rule, the spelling from dictation is quite as good as one would expect; though the absurd mistakes which are sometimes made, lead me rather to think, that it is often done more by ear than by understanding what is read out. This, however, would immediately correct itself if the reading was better taught, and care was taken that every passage read in the school, was thoroughly understood by every child in the class. No doubt, one great difficulty in teaching pauper children to read intelligently, arises from the fact of their confinement in the

Mr. Davies' Report.

workhouse, and their consequent want of opportunity of seeing and hearing about the common things of every day life, and of associating with grown up people. Could the quality of the reading be brought up to the proper standard, I believe that elementary education in workhouse schools would be little, if at all, inferior to that given in National and Board Schools, and would at all events be sufficient for its purpose, and as good as can be expected to be given entirely at the expense of the public.

Although I think, that we may be very fairly well satisfied with the ordinary instruction given in the larger schools, I cannot say that I consider the industrial training, as at present carried on, at all on a satisfactory footing; and I am very much afraid, that it is not in the nature of things that it should be so, unless the system is very materially altered. In the first place, it is often used as an excuse for keeping the children out of school, the real object being, by no means so much the teaching them anything that may be hereafter useful to them, as it is, by using their labour, to get through the work of the house at the least expense to the ratepayers. In one case I found that a boy 12 years of age, in the 4th standard, had been employed for five consecutive weeks in the porter's lodge, without ever being in the school at all during the whole of that period. This though the worst case, is not the only one of the sort that has come to my knowledge. Next, the industrial trainers for boys are generally tailors, and shoemakers, and, as far as I can make out, in many schools very little is taught that is of any practical use; and the boys are so young, and frequently so short a time in the shop, that it generally happens that their schooling suffers while they do not learn enough of the trade to which they are put, to make up for the interruption of their education. Here again the saving of the ratepayers pockets also comes in, and when the boys are in the shop, mere patching and mending (not only for the children, but also for all the inmates) occupy much time, which ought to be employed in real instruction, such as would fit those who are eventually apprenticed to the trades they have been learning, to make a good start and more rapidly to become good workmen than the ordinary apprentice who has not had the same advantage of previous instruction. I do not say that it is not of some use to the boys, to have learnt to mend their own clothes, but I do not think the results justify the amount of public money, which is paid to the guardians for the industrial trainers. As, after all, most of the boys in the country unions become farm labourers, I look upon work in the garden and the field, as far more useful, than any other which can be given to them. In this matter, I think the girls are better cared for than the boys, and though I often have to complain, that they too are taken out of school, as I think, improperly, to do the house-work; there can be no doubt that what they are taught, in many unions, in the way of scrubbing, cleaning, and other domestic duties, is most useful in fitting them for service; and those matrons, who devote themselves to this work, and really endeavour to bring the girls up well, tell me with pride, that they never have a girl sent back to them for whom they have once found a place. It seems to me, that the clashing of the school and industrial work ought in some way to be checked, and strict rules laid down, to prevent children from losing the full benefits of attending school. I fully believe, that, if a limit of age and place in the school was fixed, below which no child should be put to any work, the educational progress would be so much more rapid, that in a vast majority of cases, it would be possible at about the age of 13, to remove the boys, at all events, entirely from school, and permit them to employ their whole time in whatever work

Turnpike Trusts.

might be considered most likely to provide them hereafter with a means of living.

I have, &c.

BYAM DAVIES.

To
The Right Hon. Sir Charles Dilke, Bart., M.P.,
President of the Local Government Board.

No. 37.

TURNPIKE TRUSTS.—STATEMENT as to TURNPIKE TRUSTS in ENGLAND AND WALES, 1880–81.

The Turnpike Returns for the year ended 25th March 1881, were presented to Parliament in the last Session.

The Table on p. 111 shows the receipts, expenditure, and debts of the Turnpike Trusts in England and North Wales in each of the 10 years 1871 to 1880–81.

From that Table it will be seen that the number of Turnpike Trusts in England and North Wales has fallen since 1871 from 852 to 184. In the same period the total receipts have been reduced from 795,312*l.* to 184,334*l.*, and the total expenditure from 820,563*l.* to 199,294*l.*

Under the head of repairs of roads in the annual Returns are included the sums paid to the highway authorities in the appropriation of the surplus funds of expired Trusts. The total amount so paid in the year ended 25th March 1881, was 4,628*l.* After deducting this sum, and also the estimated value of the work performed in aid by highway authorities, it appears that the amount applied to the repair of roads by the Trusts during the year was 95,535*l.*

The Table on p. 112 shows the receipts from tolls, and the expenditure in repairs, exclusive of the sums referred to above, in respect of each county in England and North Wales during the year 1880–81, and similar particulars in respect of the year 1871.

The amount applied in discharge of bonded debt in the year 1880–81 was 54,357*l.* This amount is equivalent to 35*l.* 3*s.* per cent. on the toll income for the year, and 9*l.* 17*s.* 7*d.* per cent. on the amount of the debt outstanding at the commencement of the year. In each case the per-centage slightly exceeds that of the previous year, as is shown in the subjoined Table, which contains these particulars in respect of each of the years 1871 to 1880–81, inclusive:—

YEAR.	Amount applied towards Payment of Debt.	Per-centage on the Toll Income.	Per-centage on the Bonded Debt.
	£	£ *s.* *d.*	£ *s.* *d.*
1871	176,142	24 4 2 per cent.	6 11 10 per cent.
1872	138,670	21 12 9 „	5 12 11 „
1873	139,594	24 18 2 „	6 3 4 „
1874	142,155	27 7 6 „	6 19 6 „
1875	133,426	29 0 4 „	7 9 8 „
1876	199,939	29 12 0 „	7 15 5 „
1877	117,339	34 10 4 „	9 2 11 „
1878–79	117,635	36 2 11 „	9 9 4 „
1879–80	68,384	34 15 11 „	9 11 9 „
1880–81	54,357	35 3 0 „	9 17 7 „

(*continued on page* 113.)

ENGLAND AND NORTH WALES.

	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878–79.*	1879–80.	1880–81.
RECEIPTS.	£	£	£	£	£	£	£	£	£	£
Tolls	727,562	640,842	560,366	519,286	459,770	405,181	339,937	325,423	196,510	154,642
Parish aid	29,791	30,532	31,030	30,240	26,934	23,113	21,805	19,682	15,943	13,933
Money borrowed	60	30	—	—	—	—	—	—	—	—
Other Receipts	37,899	48,910	22,520	30,732	29,318	28,775	30,166	28,489	16,299	15,759
	795,312	720,314	613,916	580,258	516,022	457,069	391,908	373,594	228,752	184,334
EXPENDITURE.										
Repairs of Roads	451,807	427,527	354,491	323,069	282,273	258,554	209,783	210,363	134,335	100,163
Improvements	19,696	14,332	10,260	9,046	8,319	8,631	5,494	7,477	2,216	12,056
Salaries	59,910	55,366	46,270	42,348	37,137	31,795	26,002	24,444	16,110	12,435
Law Charges	10,881	12,982	8,543	10,245	8,743	9,369	7,445	7,820	5,331	3,673
Interest of Debt	71,301	67,769	56,294	43,624	35,631	26,403	17,526	15,964	8,541	7,513
Bonded Debt paid off	176,142	138,670	139,594	142,155	133,426	119,939	117,339	117,635	68,384	54,357
Other Payments	30,826	35,158	18,652	22,477	19,903	17,468	15,344	16,250	11,758	9,097
	820,563	751,804	634,104	592,964	525,432	472,159	398,933	399,953	246,675	199,294
Bonded Debt	2,455,820	2,263,453	2,037,025	1,782,887	1,543,382	1,283,017	1,009,998	713,164	550,237	420,294
Unpaid Interest	307,506	256,386	117,108	91,131	64,324	52,009	28,084	25,647	20,928	20,643
Number of Trusts	852	794	706	645	569	505	418	325	234	184

* From 1st January 1878 to 25th March 1879.

Turnpike Trusts.

STATEMENT showing, in respect to each County in ENGLAND and NORTH WALES, the TOLL INCOME and the AMOUNT EXPENDED in REPAIRS of ROADS (exclusive of Statute Labour performed, and exclusive of the Sums paid to Highway Authorities on the Termination of Trusts), in the Year 1871, and in the Year ended 25th March 1881, and also the Increase or Decrease in such Amounts respectively in the latter Year as compared with 1871.

COUNTIES.	TOLLS.				REPAIRS OF ROADS.			
	1871.	1880–81.	Increase.	Decrease.	1871.	1880–81.	Increase.	Decrease.
ENGLAND.	£	£	£	£	£	£	£	£
Bedford	2,093	—	—	2,093	1,262	—	—	1,262
Berks	5,648	—	—	5,648	3,665	—	—	3,665
Bucks	3,708	—	—	3,708	2,568	—	—	2,568
Cambridge	7,492	90	—	7,402	5,512	—	—	5,512
Chester	32,327	12,489	—	19,838	18,706	8,005	—	10,701
Cornwall	17,317	4,321	—	12,996	8,887	1,742	—	7,145
Cumberland	8,172	4,620	—	3,552	5,255	2,717	—	2,538
Derby	27,598	9,383	—	18,215	17,502	5,391	—	12,111
Devon	39,602	17,172	—	22,430	13,803	7,865	—	5,938
Dorset	14,761	3,771	—	10,990	6,425	1,716	—	4,709
Durham	11,275	728	—	10,547	7,142	538	—	6,604
Essex	—	—	—	—	—	—	—	—
Gloucester	30,379	3,109	—	27,270	18,647	1,605	—	17,042
Hants	13,971	4,211	—	9,760	9,992	6,052	—	3,940
Hereford	8,054	—	—	8,054	5,385	—	—	5,385
Hertford	8,501	2,090	—	6,411	5,596	1,349	—	4,247
Huntingdon	4,749	—	—	4,749	3,008	—	—	3,008
Kent	16,247	2,336	—	13,911	10,009	1,435	—	8,574
Lancaster	81,621	26,044	—	55,577	42,047	15,504	—	26,543
Leicester	16,522	2,891	—	13,631	11,077	2,451	—	8,626
Lincoln	14,289	955	—	13,334	10,387	824	—	9,563
Middlesex	32,651	—	—	32,651	28,332	—	—	28,332
Monmouth	10,409	3,319	—	7,090	6,262	1,669	—	4,593
Norfolk	6,740	696	—	6,044	5,256	371	—	4,885
Northampton	13,109	279	—	12,830	9,628	166	—	9,462
Northumberland	12,869	6,223	—	6,646	9,870	4,097	—	5,773
Nottingham	10,916	1,167	—	9,749	6,391	622	—	5,769
Oxford	12,912	1,285	—	11,627	8,047	679	—	7,368
Rutland	1,622	—	—	1,622	1,224	—	—	1,224
Salop	14,547	425	—	14,122	10,274	279	—	9,995
Somerset	29,301	2,358	—	26,943	17,573	1,614	—	15,959
Stafford	31,964	7,128	—	24,836	18,827	5,941	—	12,886
Suffolk	2,832	954	—	1,878	1,686	320	—	1,366
Surrey	6,334	2,754	—	3,580	3,151	2,358	—	793
Sussex	19,077	2,264	—	16,813	11,003	1,701	—	9,302
Warwick	18,805	71	—	18,734	11,291	18	—	11,273
Westmorland	3,609	895	—	2,714	1,240	96	—	1,144
Wilts	12,393	—	—	12,393	7,802	—	—	7,802
Worcester	19,436	—	—	19,436	11,467	—	—	11,467
York	75,403	12,322	—	63,081	41,404	7,637	—	33,767
NORTH WALES.								
Anglesey	3,294	3,532	238	—	2,603	2,972	369	—
Carnarvon	3,280	3,000	—	280	1,782	1,555	—	227
Denbigh	3,856	900	—	2,956	2,596	446	—	2,150
Flint	7,650	4,188	—	3,462	5,875	2,366	—	3,509
Merioneth	2,377	1,738	—	639	1,527	1,190	—	337
Montgomery	7,850	4,934	—	2,916	4,965	2,244	—	2,721
Total	727,562	154,642	238	573,158	436,951	95,535	369	341,785
	Net Decrease £572,920.				Net Decrease £341,416.			

Turnpike Trusts.

The amount applied in discharge of bonded debt, 54,357*l.*, does not, however, represent the entire reduction on this head, the debt being diminished by other means than actual payment, as appears by the following statement :—

Bonded debt, 25th March 1880 - - - -		£550,237
Decrease in debt, thus :—		
Amount of cash paid - -	£54,357	
Amount of savings effected by compositions - - - -	6,527	
Amount of debts extinguished -	69,059	
		129,943
Bonded debt, 25th March 1881 - - -		£420,294

Of the amount applied in reduction of debt, 15,124*l.* was paid after receipt of tenders for composition, and debts to the amount of 21,651*l.* were discharged thereby. The amount of debt paid off at par was 29,233*l.*

Since the passing of the 7 & 8 Vict. c. 91. for the consolidation and management of the turnpike roads in South Wales, the annual returns in respect of them have been kept distinct from the returns for England and North Wales. The following abstract shows the receipts and expenditure in respect of these roads for each of the five years 1877–81 inclusive :—

South Wales Turnpike Roads, under the Act of the 7 & 8 Vict. c. 91.

	1877.	1878.	1879.	1880.	1881.
Receipts.	£	£	£	£	£
Tolls - - - -	22,526	21,433	21,969	22,340	22,597
County Road Rates, &c. -	2,937	2,433	3,319	1,793	3,136
Other Receipts - -	1,161	1,671	1,775	711	1,465
Total Receipts -	26,624	25,537	27,063	24,844	27,198
Expenditure.					
Repairs - - - -	23,873	23,432	21,715	22,594	22,017
Improvements - -	210	—	65	31	—
Salaries - - - -	2,383	2,388	2,478	2,514	2,500
Law Charges - - -	22	13	332	720	1,758
Annuities - - -	—	—	—	—	—
Other Payments - -	783	628	613	474	1,346
Total Expenditure -	27,271	26,461	25,203	26,333	27,621

The Annual Turnpike Acts Continuance Act, 1882.

The following statement shows the effect of the annual Turnpike Acts Continuance Act, 1882 (45 & 46 Vict. c. 52.), as regards the particular Trusts to which the Local Acts specified in the six schedules thereto respectively relate :—

1. The Local Acts mentioned in the first schedule relate to the following nine Trusts, which were fixed to expire on the 1st November 1882 :—

Turnpike Trusts.

County.	Trust.
Derby	Glossop and Marple Bridge.
Devon	Kingsbridge and Dartmouth.
Dorset	Blandford and Wimborne.
	Poole.
Kent	Tonbridge and Ightham.
Lancaster	Rochdale and Edenfield.
Lincoln	Lincoln Heath and Market Deeping, Bourn District.
York	Doncaster and Tadcaster.
Flint	Lower King's Ferry.

2. The Local Acts named in the second schedule relate to the Trusts hereafter mentioned, which were abolished by the repeal of the Local Acts on the 1st November 1882:—

County.	Trust.
York	Wakefield and Aberford.
Flint	St. Asaph and Conway.

3. In the third schedule are specified the Local Acts relating to the following Trusts which are to be abolished on the dates respectively mentioned, the Acts being subject to certain modifications from the 1st November 1882:—

County.	Trust.	Date of Abolition.
Derby	Chesterfield and Worksop	1st November 1883.
Durham	Egleston Roads	1st November 1887.
Sussex	Beeding and Old Shoreham	1st November 1885.
	Horsham and Steyning	1st November 1885.

4. The fourth schedule refers to the Ashborne, Sudbury, and Yoxall Bridge, and the Uttoxeter and Collingwood Plain Trusts, the local Act relating to which is to continue in force, subject to certain modifications until the 1st of November 1888, when the same is to be repealed.

5. The remaining schedules comprise the Local Acts for the following Trusts, the terms of which were limited to the 1st of November 1883, with the view of bringing these Trusts under the consideration of a Select Committee of the House of Commons in the Session of 1883:—

County.	Trust.
Cumberland	Carlisle and Eamont Bridge, Northern Division.
Devon	Tiverton.
Gloucester	Tewkesbury, Severn Bridge.
Kent	Biddenden to Boundgate.
Lancaster	Oldham and Ripponden.
Northumberland	Berwick Norham and Islandshires. Ford and Lowick.
Surrey	Kingston and Leatherhead.
York	Rotherham and Wortley.
Anglesey, Carnarvon, Denbigh, Merioneth, Salop	Shrewsbury and Holyhead.

The following statement shows the number of Turnpike Trusts which existed on the 31st December 1864; the number which have

expired in each year since that date; the number in existence on the 1st January 1883; together with the number which will be abolished in each year by the operation of the Annual Turnpike Acts Continuance Acts (including the Act of 1882); and also the length of road represented by each class of Trusts.

		Number of Trusts.	Length of Roads.
1. Total number of Trusts in existence on the 31st December 1864, and the length of the roads comprised in such Trusts - -		1,048	Miles. furl. yds. 20,589 3 194
2. Number of Trusts which have expired in each year 1865 to 1881 inclusive - - -	1865 -	9	211 2 210
	1866 -	19	526 5 70
	1867 -	43	781 0 84
	1868 -	13	333 3 114
	1869 -	11	102 4 64
	1870 -	78	1,613 3 160
	1871 -	58	1,038 0 192
	1872 -	84	1,752 5 103
	1873 -	45	716 6 205
	1874 -	70	1,311 0 208
	1875 -	68	1,270 3 147
	1876 -	81	1,529 3 78
	1877 -	98	1,955 0 81
	1878 -	87	1,592 6 200
	1879 -	53	1,035 3 27
	1880 -	55	1,109 6 2
	1881 -	24	511 5 89
	1882 -	33	996 3 123
3. Total number of Trusts expired as above -		929	18,388 2 177
4. Total number of Trusts in existence on 1st January 1883, corrected for amalgamated Trusts, &c. - - - - -		71	2,180 7 81
5. Number of Trusts which will expire in each of the years named, so far as the terms are at present fixed by the Turnpike Acts Continuance Acts - - - -	1883 -	9	269 0 204
	1884 -	3	170 0 25
	1885 -	9	336 5 26
	1886 -	—	—
	1887 -	1	12 0 0
	1888 -	1	29 0 0
6. Total number of Trusts fixed to expire in the years 1883 to 1888 inclusive - -		23	816 6 35
7. Number of Trusts whose terms are continued under the Annual Turnpike Acts Continuance Acts, but not finally limited -		2	25 5 176

Turnpike Trusts.

The number of Trusts in existence on the 1st of January 1883 was 71. Of this number 23 have been considered by Select Committees of the House of Commons, and have been fixed to expire at various dates between 1st January 1883 and 31st December 1888; 2 other Trusts have also been so considered, but their terms have not been finally limited; 9 are scheduled in the Turnpike Acts Continuance Act, 1882, for consideration in 1883, and the remaining 37 Trusts are those referred to in the subjoined Table whose terms as fixed by their Local Acts have not yet expired, and which, unless dealt with on special grounds, will continue until the dates specified below:—

TRUSTS WHOSE TERMS AS FIXED BY THEIR LOCAL ACTS HAVE NOT EXPIRED.

	Number of Trusts.	Length of Roads.
		Miles. furl. yds.
Number of Turnpike Trusts to expire at the end of the session after some date in the years named under the provisions of their local Acts — 1883	9	147 3 9
1884	9	209 0 101
1885	5	54 0 149
1886	3	26 1 126
1887	4	30 6 164
1889	1	10 2 27
1890	2	78 5 132
1893	1	27 2 0
Unlimited and special	3	517 0 50
Total	37	1,100 6 98

Local Government Board,
1st January 1883.

HIGHWAY RETURNS.

Highway Returns.

The Highway Returns for the year ended 25th March, 1881, were completed and presented to Parliament in the last session.

These returns comprise the following abstracts:—

I. Abstracts of the accounts relating to the highways of the highway districts in England and North Wales for the year ended 25th March 1881.

II. Abstracts of the accounts relating to the highways of the separate highway parishes in England and North Wales, not included in any highway district, for the year ended 25th March 1881.

III. Abstracts of the accounts relating to the highways of the highway districts in South Wales for the year ended 25th March 1881.

On page 117 will be found a comparative statement of the receipts and expenditure, &c. as shown in the returns for highway districts and separate highway parishes in England and Wales, for the years ended 25th March 1880 and 1881.

From this statement it appears that the number of separate highway parishes for which returns were made for the year 1880–81 was 6,037. The receipts on account of the highways of these parishes amounted to 687,006*l.*, and the expenditure to 665,212*l.* Comparing these figures with those relating to the previous year, an increase of 234 appears

COMPARATIVE STATEMENT.

——	1879–80.				1880–81.				Increase.	Decrease.
	Separate Highway Parishes.	Highway Districts, England and North Wales.	Highway Districts, South Wales.	Total.	Separate Highway Parishes.	Highway Districts, England and North Wales.	Highway Districts, South Wales.	TOTAL.	1880–81.	1880–81.
RECEIPTS.	£	£	£	£	£	£	£	£	£	£
Rates (including value of work performed in lieu thereof) -	593,823	1,095,147	54,273	1,743,243	613,144	1,009,984	51,720	1,674,848	—	68,395
Contributions from County Authorities - - -	14,264	59,569	—	73,833	49,917	151,478	—	201,395	127,562	—
Receipts from Turnpike Trusts -	2,195	6,038	—	8,233	2,113	5,851	—	7,964	—	269
Receipts on account of extraordinary Traffic - -	2,197	2,133	—	4,330	2,940	3,826	—	6,766	2,436	—
Money borrowed - -	—	1,025	3,965	4,990	—	2,700	1,050	3,750	—	1,240
Other Receipts - - -	16,241	16,379	435	33,055	18,892	15,168	527	34,587	1,532	—
	628,720	1,180,291	58,673	1,867,684	687,006	1,189,007	53,297	1,929,310	131,530	69,904
									61,626 Net Increase	
EXPENDITURE.										
Repairs - - -	592,181	1,032,503	44,983	1,669,667	615,818	1,054,424	42,744	1,712,986	43,319	—
Improvements - - -	—	21,093	5,558	26,651	—	18,565	3,868	22,433	—	4,218
Salaries - - -	24,525	73,903	6,227	104,655	26,855	72,951	6,220	106,026	1,371	—
Law Charges - - -	—	3,258	—	3,258	—	3,223	—	3,223	—	35
Interest on Loans - -	—	2,284	—	2,284	—	2,095	191	2,286	2	—
Repayments of Loans - -	—	4,180	—	4,180	—	4,775	38	4,813	633	—
Contributions to Turnpike Trusts	7,781	5,407	—	13,188	6,947	4,841	—	11,788	—	1,400
Other Payments - -	13,109	16,005	1,235	30,349	15,592	14,688	1,166	31,446	1,097	—
	637,596	1,158,633	58,003	1,854,232	665,212	1,175,562	54,227	1,895,001	46,422	5,653
									40,769 Net Increase	
Loans outstanding - -	—	45,615	3,965	49,580	—	42,607	4,977	47,584	—	1,996
Number of Highway Parishes -	5,804	8,273	772	14,849	6,037	8,019	772	14,828	—	21

Highway Returns.

in the number of separate highway parishes, while the total receipts were also increased by 58,286*l.* and the total expenditure by 27,616*l.*

The number of highway districts in England and North Wales in the year 1880–81 was 376, and the number of highway parishes comprised therein 8,019. These figures, as compared with those of the previous year, show a net increase of 10 in the number of highway districts, and a decrease of 254 in the number of the highway parishes comprised in districts. The receipts of the highway boards in England and North Wales in the year 1880–81 amounted to 1,189,007*l.* and the expenditure to 1,175,562*l.*, the total amounts under these heads in the previous year being, receipts 1,180,291*l.*, expenditure 1,158,633*l.*

In 27 districts, comprising 519 highway parishes, the rural sanitary authorities exercised the powers of highway boards which had been conferred upon them by the county authority under section 4 of the Highways and Locomotives (Amendment) Act, 1878.

The expenditure on improvements by highway boards during the year amounted to 22,433*l.*

Additional loans to the amount of 3,750*l.* were contracted, and sums amounting to 4,813*l.* were applied in payment of loans, leaving at the end of the year 47,584*l.* loans outstanding.

The aggregate amount of interest paid on loans was 2,286*l.*, the average rate of interest on the amount of the loans outstanding at the commencement of the year being 4*l.* 12*s.* 2*d.* per cent.

The receipts of the highway boards of South Wales amounted to 53,297*l.*, and the expenditure to 54,227*l.*, these totals being respectively 5,376*l.* and 3,776*l.* less than those of the previous year.

The subjoined Table shows the mileage and cost of repairs of the roads comprised in separate highway parishes and highway districts (exclusive of existing turnpike roads) in the year 1880–81 :—

—	Number of Highway Parishes.	Mileage 1880–81.			Cost of Repairs 1880–81.			Average Cost of Repairs per Mile 1880–81.	
		Main Roads.	Ordinary Highways.	Total Mileage.	Main Roads.	Ordinary Highways.	Total Cost of Repairs.	Main Roads.	Ordinary Highways.
		Miles.	Miles.	Miles.	£	£	£	£ s.	£ s.
Separate Highway Parishes (England and North Wales)	6,037	4,097	38,097	42,194	151,659	464,159	615,818	37 0	12 4
Highway Districts (England and North Wales)	8,019	9,598	56,717	66,315	341,134	705,252	1,046,386	35 11	12 9
Highway Districts (South Wales)	772	—	7,264	7,264	—	42,744	42,744	—	5 18
	14,828	13,695	102,078	115,773	492,793	1,212,155	1,704,948	36 0	11 17

In this statement the roads are presented in two classes, viz., "Main Roads," and "Ordinary Highways," and the cost of the maintenance of each class is shown separately.

The former category consists of disturnpiked and other roads which have been constituted main roads under the Highways and Locomotives (Amendment) Act, 1878, and the latter class embraces all other highways which are situate in separate highway parishes and highway districts, and are repairable out of the highway rates.

This statement shows that while the aggregate length of the roads in separate highway parishes was 42,194 miles, and the total cost of repairs 615,818*l.* the length of the roads in highway districts was 66,315 miles, and the cost of repairs 1,046,386*l.*

Highway Returns.

STATEMENT showing in respect of each COUNTY in ENGLAND and NORTH WALES for the Year 1880–81: (1) The Number of separate Highway Parishes not included in any Highway District; (2) The Number of Parishes included in Highway Districts; and (3) The Total Number of Highway Parishes.

NAMES OF COUNTIES.	(1.) Number of separate Highway Parishes not included in any Highway District.	(2.) Number of Parishes included in Highway Districts.	(3.) Total Number of Highway Parishes.
ENGLAND.			
Bedfordshire	20	117	137
Berkshire	96	109	205
Buckinghamshire	247	—	247
Cambridgeshire	128	25	153
Cheshire	—	441	441
Cornwall	4	196	200
Cumberland	181	144	325
Derbyshire	279	55	334
Devonshire	9	424	433
Dorsetshire	3	292	295
Durham	1	262	263
Essex	239	148	387
Gloucestershire	43	324	367
Hampshire	10	309	319
Isle of Wight	30	—	30
Herefordshire	2	247	249
Hertfordshire	90	47	137
Huntingdonshire	—	99	99
Kent	3	372	375
Lancashire	284	113	397
Leicestershire	—	342	342
Lincolnshire	655	63	718
Middlesex	27	6	33
Monmouthshire	4	135	139
Norfolk	695	—	695
Northamptonshire	35	322	357
Northumberland	272	334	606
Nottinghamshire	—	274	274
Oxfordshire	1	302	303
Rutlandshire	58	—	58
Shropshire	12	235	247
Somersetshire	—	480	480
Staffordshire	422	—	422
Suffolk	446	54	500
Surrey	10	113	123
Sussex	262	36	298
Warwickshire	207	80	287
Westmorland	161	—	161
Wiltshire	2	337	339
Worcestershire	78	174	252
Yorkshire	740	740	1,480
NORTH WALES.			
Anglesey	74	1	75
Carnarvonshire	68	—	68
Denbighshire	47	73	120
Flintshire	14	128	142
Merionethshire	78	5	83
Montgomeryshire	—	61	61
TOTAL of ENGLAND and NORTH WALES	6,037	8,019	14,056

Highway Returns.

The average cost per mile of the repairs of the main roads in separate highway parishes was 37*l.*, and of the ordinary highways 12*l.* 4*s.* In the highway districts the average cost per mile of the main roads was, 35*l.* 11*s.*; and of the ordinary highways 12*l.* 9*s.*

According to the Returns for South Wales, the mileage of the highways in the year 1880–81 was 7,264 miles, and the expenditure in repairs 42,744*l.*, or, on an average, 5*l.* 18*s.* per mile, the average for previous year being 6*l.* 4*s.* per mile.

On page 119 will be found a Table showing in respect of each county in England and North Wales, the number of separate highway parishes not included in any highway district, the number of highway parishes included in highway districts, and the total number of highway parishes for which returns have been made for the year ended 25th March 1881.

Local Government Board,
1*st January* 1883.

No. 38.

METROPOLITAN WATER SUPPLY. — REPORT by Colonel FRANK BOLTON, Water Examiner appointed under the Metropolis Water Act, 1871.

4, *The Sanctuary, S.W.*,
31*st January* 1883.

SIR,

Col. Bolton's Report.

As Water Examiner appointed under the Metropolis Water Act, 1871, I have the honour to submit to you a report of the results of the examinations made and various duties performed by me, in connexion with the water supplied to the Metropolis by the eight Metropolitan Water Companies, during the year 1882.

Acting in compliance with my instructions, I have made monthly examinations of the various Metropolitan Waterworks, and have duly reported the results of such examinations to the Local Government Board.

It is the duty of the Water Examiner under the Act of 1871 to ascertain whether or not the Companies have complied with the requirements of section 4 of the Act of 1852, which enacts that "every Company shall effectually filter all water supplied by them within the Metropolis, for domestic purposes, before the same shall pass into the pipes for distribution."

The effectual filtration of river water depends upon—

1stly. A sufficient area of properly constructed filter-beds, constantly cleaned and fresh sanded from time to time as the original thickness is reduced:

2ndly. The rate of filtration being controlled, and limited to a certain speed:

3rdly. The water delivered into the filter-beds having been previously stored in subsiding reservoirs, and the capacity of these reservoirs being such as to avoid the necessity for the intake of turbid and muddy water during the time of extraordinary and heavy floods, which tend to foul and choke the filters.

In addition to inspecting the filter-beds and reservoirs, and examining the quality of the water both at the intake and after filtration at the

works, I have included in my reports the following information and particulars respecting each of the Metropolitan Water Companies :— *Col. Bolton's Report.*

1. Source of supply.
2. Situation of the works.
3. Total volume which may be supplied daily, in gallons.
4. Average daily supply during each month, in gallons.
5. Estimated per-centage delivered for other than domestic purposes.
6. Number of houses supplied.
7. Number of houses on constant supply.
8. Estimated population supplied within the districts of the Water Companies.
9. Number of subsiding and storage reservoirs for unfiltered water, showing the area in acres, and available capacity in gallons.
10. Number and capacity of the storage reservoirs for filtered water (covered within the radius prescribed).
11. Engine power, and horse power thereof.
12. Number of miles of mains in each district.
13. Number of miles of mains in the Metropolis.
14. Number of miles of streets with mains constantly charged within the Metropolis.
15. Number of street hydrants and private fire-cocks erected within the Metropolis, and number of fire-plugs.
16. Greatest lift by steam power.
17. Greatest and least head of pressure in the district supplied.
18. Number of filter-beds, with area in acres.
19. Depth of sand and other materials composing filter-beds.
20. Maximum rate of filtration per square foot of filtering area, in gallons per hour.
21. Number of acres of filter-beds cleaned during each month.
22. Appearance of water before and after filtration.
23. Condition of samples taken daily.
24. Statement as to progress of works and alterations made by each Company, and of works proposed and recommended to be undertaken.
25. Analysis of the water supplied to the Metropolis, made for the Companies by analysts of their own appointment.
26. Analysis made for the Registrar-General by Dr. Frankland, F.R.S., of the water supplied to the Metropolis and other places.
27. Report made for the Metropolitan vestries by Professor Wanklyn and W. J. Cooper, Esq., on the organic matter in the water supplied to the Metropolis.

The *Sources of Supply* of the water used in the Metropolis in the districts supplied by the Water Companies are as follows :—

1. Kent Waterworks Company	The chalk wells between Crayford and Deptford.
2. New River Company -	The River Lea, and wells at Amwell End, Amwell Hill, Hoddesdon, Turnford, Cheshunt, Southgate, and Betstile and Broad Mead. The total volume which may be taken daily being unlimited.

Vol. Bolton's Report.

3. East London Company -	The River Lea, from which the quantity that may be abstracted daily is unlimited; and from the Thames at Sunbury, the volume to be abstracted daily at this place being limited to 10,000,000 gallons.
4. Southwark and Vauxhall Company - - -	The Thames at Hampton.
5. West Middlesex Company -	
6. Grand Junction Company -	The Thames, and gravel beds at Hampton.
7. Lambeth Company - -	The Thames at Molesey and springs from the gravel beds and chalk at West Molesey and Ditton.
8. Chelsea Company - -	The Thames at Molesey.

The volume which may be taken daily from the Thames is limited to 110,000,000 gallons, but from the other above-mentioned sources it is unlimited.

The state of the water in the Thames and Lea during the months of January, February, parts of March and April, November and December 1882 was generally bad, and owing to the frequent heavy floods, the water that had to be taken in by the Companies using these rivers as a source of supply, was much polluted and was found to be extremely difficult to filter; while the Southwark and Vauxhall Company, who were unprovided with sufficient storage reservoirs, were compelled to take in dirty and muddy water, in which there was a large amount of solid matter, too fine to settle quickly. The water in such a state is very difficult to deal with, the solid impurities in suspension being only practically got rid of by long subsidence previous to filtration, as they chiefly consist of clay, marl, and chalk in a very finely divided state.

The rate of filtration of the Metropolitan water supply should not exceed 540 gallons per square yard of filter-bed each 24 hours, or $2\frac{1}{2}$ gallons per square foot per hour. Filtration ought to be effectual at this rate which for all practical purposes may be considered as a standard. Effectual filtration is greatly facilitated by previous subsidence.

The average rate of filtration per square foot of filtering area per hour for each of the seven Companies is as follows:—New River, 2; East London, $1\frac{1}{3}$; Southwark, $1\frac{1}{2}$; West Middlesex, $1\frac{1}{3}$; Grand Junction, $1\frac{1}{2}$; Lambeth, 2; and Chelsea, $1\frac{3}{4}$. No Company therefore now exceeds this rate of filtration.

The analyses of the water supplied by the Water Companies for 1882, as furnished by Dr. Frankland, F.R.S., to the Local Government Board, and by Dr. C. Meymott Tidy, M.B., and by Dr. Albert J. Bernays for the Water Companies, and the Reports on the Organic Matter in the water as furnished by Professor Wanklyn and W. J. Cooper to the Metropolitan Vestries, have been duly published in my monthly reports to the Local Government Board, and about 250 copies of these reports are distributed each month amongst the Water Companies, the Metropolitan Board of Works, the Vestries, the Medical Officers of Health, the London press, and others interested in the water supply of the Metropolis.

The Annual Report on the analyses of the waters supplied by the Companies, made by Professor Frankland, for the year 1882, addressed to the President, being published in the Annual Report of the Local

Government Board 1882–83, a reference thereto will show the degree of efficiency of filtration of the Thames and Lea waters, distributed by the various Companies in 1882, as ascertained by chemical analyses. *Col. Bolton's Report.*

Notwithstanding the general effectual filtration and delivery of good water by the Companies to their respective districts, the supply frequently deteriorates after having been delivered by the Companies into the cisterns of the consumers. The remedy for this is a constant supply, but until such constant supply is general, the attention of all householders should be given to the fittings and cleanliness of their cisterns, as well as to their house drains and the water pipes connected therewith, upon which depend in a great measure the purity and abundance of the domestic water supply.

The attention of the householders of the Metropolis should be given to the following points:—

1. It is most desirable that all stop-valves should be fixed outside the premises of water tenants. This is desirable, because, if the stop-valves are inside, in the event of severe frost and a number of bursts occurring on the lead communication pipes, all the houses in the street are deprived of their supply during the whole time that the repairs are being effected on the burst pipes, whereas, if the stop-valve were outside, it would only be necessary to shut it down.

2. The following clause of the Board of Trade Regulations, 1872, relative to waste pipes, if carried out in its integrity, will prevent contamination of the water from the gases generated by sewage, which are extremely liable to flow back into the cisterns and become absorbed by the water unless the overflow pipe is brought outside the house and the end left exposed to the air, instead of being carried into the drain.

> *Regulation* 14. "*No overflow or waste-pipe other than a* "*'warning-pipe' shall be attached to any cistern supplied with* "*water by the Company, and every such overflow or waste-pipe* "*existing at the time when these Regulations come into operation* "*shall be removed, or at the option of the consumer shall be* "*converted into an efficient 'warning-pipe,' within two calendar* "*months next after the Company shall have given to the occupier* "*of, or left at the premises in which such cistern is situate, a* "*notice in writing requiring such alteration to be made.*"

The particular object of the above is to prevent the waste of water, but if the overflow pipe is brought outside the house and the end left exposed to the air, instead of being carried into the drain as is often the case, it will effect an object of far greater importance by getting rid of the poisonous effluvia and gases from the drains which would otherwise ascend through the pipe, and not only be partly absorbed by the water in the cistern, but be partly mixed with the air in the houses, thereby becoming a cause of fever and disease.

The exercise of Government supervision tends to the effectual filtration and delivery of good water by the Companies to their respective districts, but from many causes the supply frequently deteriorates after having been delivered by the Companies into the cisterns of the consumers. It is of the utmost importance that the attention of householders should be given to the fittings and cleanliness of their cisterns, as well as to their house-drains and the water-pipes connected therewith, upon which depend in a great measure the purity and sufficiency of the domestic water supply. An inspection of the cisterns too frequently shows that they are in a state of foulness totally unexpected, and generally caused by local circumstances and faults.

Col. Bolton's Report.

The remedy for this deterioration is doubtless to be found in a constant supply. Such constant supply, however, is not yet general; meanwhile the Water Companies are being urged to extend the constant supply in their respective districts with the least possible delay, and it would materially facilitate the general introduction of the constant supply if the following rules, framed under the regulations confirmed by the Board of Trade as provided in the Metropolis Water Act, 1871, were generally observed by water tenants as to fittings in the transfer of houses from intermittent to constant supply, viz. :—

1. *Communication Pipes.*—Point of entry to be first approved by the Company. Pipe to boundary fence should be new, or where the Company allow the existing lead communication pipes to remain, the strength and soundness will be entirely at the risk of the consumer.

WEIGHT OF PIPES.

Internal Diameter of Pipe in Inches.	Weight of Pipe per Yard.
½-inch.	6 lbs. per yard.
¾ "	7½ "
1 "	9 "
	12 "

Iron pipes are not allowed to be in contact with the ground.

Every house most have but one communication pipe.

Every house at present "branched" must have its own separate "communication pipe," except in the case of a group or block of houses (or those supplied by stand pipes) the water rates of which are paid by one owner; such owner may, at his option, have one sufficient communication pipe for such cock.

The connection must be made by means of sound and suitable brass screwed ferrule or stop-cock, with union, and half-inch waterway.

The joints of the stop-cock and ferrule must be "wiped" by the consumer's plumber.

All joints must be of lead, and "wiped" or plumber's joints.

No pipe to be laid in or through drains or near gas pipes.

2. *Stop-valve.*—A sound and suitable screw-down stop-valve, not less than half-inch, and not greater than the pipe, must be fixed in the communication pipe at, or near the entrance, and properly covered.

3. *Cisterns and Ball Valves.*—All cisterns must be above ground, properly covered, accessible for inspection and cleaning, and fitted with efficient ball-valves.

Wherever there is a wash-out pipe with ground plug, or any other kind of attachment, it must be connected to a warning-pipe.

4. *Standpipes.*—Standpipes or small cisterns, properly fitted, should be substituted for butts and underground cisterns.

Owners of small tenement houses are recommended, where practicable, to fix the standpipes in the kitchens or wash-houses, whereby they will be more protected from injury by frost or mischief, and future expense will be saved in repairs.

Standpipes must not be fixed over drains.

Col. Bolton's Report.

5. *Warning pipes.*—All waste-pipes must be removed or converted into warning-pipes, and so placed that the discharge of water may be readily seen by the officers of the Company.

Such pipes shall be of lead, and of the following minimum weights, viz. :—

Half-inch -	(internal diameter)	3	lbs. per yard.
Three-quarter-inch	„ „	5	„
One inch -	„ „	7	„

6. *Draw Taps.*—All draw taps should be sound and suitable, and of the "screw-down" kind.

Draw taps of the "screw-down" kind may be fixed on the rising main to supply water for drinking purposes.

Taps on the main over sinks to be of the "waste-preventer" kind.

7. *Stand-pipes in Courts.*—All stand-pipes or cocks fixed outside in courts or public places, to supply groups or blocks of houses, must be of the waste-preventer kind, and protected from injury by frost, theft, or mischief.

8. *Water-closets, &c.*—Water-closets, boilers, and urinals must be served through cisterns or services boxes, each water-closet, cistern, or service box to have an efficient waste-preventing apparatus, limiting the flush or discharge to two gallons of water, and urinals to one gallon.

Water-closet down pipes to be not less than one inch and a quarter internal diameter, and if of lead to weigh not less than 9 lbs. to the yard.

9. *Baths.*—No bath shall have any overflow pipe other than a warning-pipe. In every bath the outlet and inlet must be distinct and unconnected, the inlet to be above the high-water level, the outlet to have a water-tight plug, valve, or cock.

10. *Alteration of Fittings.*—Fittings are not be altered without two days' previous notice in writing to the Company.

11. *Penalty.*—Every person who violates, refuses, or neglects to comply with these regulations is liable to a penalty of 5*l.*

The following are the alterations and additions made to the works of the Companies during the year 1882, and the steps that have been taken by them towards providing constant supply :—

1.—*Kent Waterworks Company.*

1. *Constant supply.* — During the year 1882 the Company have given notice to the Metropolitan Board of Works of their intention to extend constant supply to 3,475 houses in Deptford and Woolwich, of which 439 houses are now so supplied. 2,287 new houses have been laid on in districts under constant supply and in new streets so supplied, making the number of houses under constant supply at the present time 23,259.

87 fire hydrants have been fixed for the Metropolitan Board of Works.

2. *New works.*—The new pumping engine at Crayford has been completed, and is now supplying the district with water from the new well.

The Company have, during the past year, laid 10¼ miles of pipe, of which 4½ miles were laid within the metropolitan area.

2.—*The New River Company.*

Col. Bolton's Report.

1. *Constant supply.*—During the year 1882, 3,977 additional houses were laid on, 756 of which were furnished with constant supply, and 1,627 houses, formerly supplied, were pulled down for street improvements.

The total number of houses having supply at the close of the year was 137,993, and of these 19,282 had service on the constant system.

2. *New works.*—Steady progress has been made during the year at the several new wells now being sunk by this Company for further supply from the chalk.

The depths now attained at these wells are as follows:

Amwell Marsh Well	101 feet.
Rye Common Well	142 „
Broxbourne Well	78 „
Hoe Lane (Enfield) Well	185 „
Highfield (Edmonton) Well	135 „
Hornsey Well	147 „

At Amwell Hill pumping station larger pumps have been fixed in substitution for the smaller ones previously in use.

The engine-house at Rye Common, with its engines, boilers, and pumps is still in progress, and is rapidly approaching completion.

A second pump has been provided and fixed in the Hoddesdon Well.

The enlargement of the Turnford Well engine-house is nearly completed—a second engine and pumps having been fixed during the year.

At the Hoe Lane Well station at Enfield a second engine has been added.

The construction of two new filtering beds, each of an area of one acre, at the Company's Green Lanes station is rapidly approaching completion, the deposit of the filtering material being now in hand. The new feed pipe arrangement in connexion therewith has been satisfactorily finished.

A covered service reservoir is in course of construction at Winchmore Hill.

The ordinary extensions of the Company's pipes in various directions during the year, added about 15 miles to the length of the Company's pipes, raising the total length of these pipes at the close of the year to 760 miles.

One hundred and thirty-four additional hydrants were fixed in the New River Company's part of the Metropolis, raising the total number to 3,950. In addition to this number there are in the Company's district, outside the Metropolis, 286 hydrants.

3.—*The East London Waterworks Company.*

1. *Constant supply.*—This Company gives constant supply to 106,043 houses, out of 137,283 supplied by them.

During the past year they have laid on 5,863 supplies.

2. *Filter beds.*—This Company has now completed the reconstruction of the whole of the Middlesex filter beds at Lea Bridge on more approved principles.

3. *New works.*—A further set of three new filter beds were completed in May last, and have since been in daily use.

The covered filtered water reservoir at Haggar Lane was completed in November last, and will be brought into use immediately. *Col. Bolton's Report*

The supply to the North Woolwich district has been greatly improved by the laying of a much larger main, crossing the Bow Creek at the Barking Road, over a new iron bridge constructed by the Company.

4.—*The Southwark and Vauxhall Waterworks Company.*

1. *Constant supply.*—During the year 1882 this Company have extended constant supply to 138 houses, making the total number supplied 3,162.

2. *Works.*—Considerable progress has been made with a well at Streatham, which, when finished, will improve the quality of the water.

The condition of the filter beds at the various stations has been good throughout the year.

Necessary repairs have been carried out in the engines, boilers, and plant at the various stations.

At Hampton a new cylinder and pump pole have been provided for No. 3 engine, old works.

3. *New mains.*—There have been about 9 miles of new mains laid during the year, and about 8½ miles of mains lowered and improved.

5.—*West Middlesex Waterworks Company.*

1. *Constant supply.*—This Company continues to give constant supply to all houses on the application of the owners, and is extending the system as required. They are giving constant supply to all new estates and buildings, and where new services are laid down constant supply is made compulsory by the Company. This Company is also giving constant supply to a considerable district in St. Pancras Parish under the Metropolis Water Act. 2,076 houses were put on constant supply during the year, making the total number of houses on constant supply 11,197.

2. *New works completed.*—The Company in order to be prepared for a large increase in the consumption of water in their district, entered into a contract for two 150 horse-power compound beam engines and pumps, and seven additional boilers to be added to their Hammersmith pumping station. These engines were completed and both were working in June, but still remain in the contractor's hands under a maintenance clause.

The two new filter-beds of 1⅛ acres area each, which were being constructed in 1881, and also a subsiding reservoir of 7½ acres area to contain 24 million gallons were completed and taken into use as follows:

No. 7.	Filter-bed	February 20th, 1882.
„ 4.	Reservoir	June 5th, 1882.
„ 8.	Filter-bed	August 2nd, 1882.

The filter-beds, which are constructed upon an improved principle, are working satisfactorily.

The No. 2, or Eastern Reservoir, was enlarged under the same contract, and its capacity increased by 1¾ million of gallons. This reservoir was completed and taken into use on the 10th November 1882. The total area of all the Company's subsiding and storage reservoirs is 37 acres, and the capacity 117½ million gallons.

Col. Bolton's Report.

In order to be prepared for a much greater demand of supply of water from Hampton, the Company entered into a contract for extending the second 36-inch main from a point near the Black Horse, Upper Richmond Road, to the reservoirs at Barnes. This work was commenced in February and completed July 6th, and water passed through the main on this day from Hampton to Barnes.

6.—*The Grand Junction Waterworks Company.*

1. *Constant supply.*—This Company are giving constant supply to 18,401 houses. They are giving constant supply to the whole of their district lying to the west of Notting Hill, as well as to all new buildings in the northern part of the parish of Paddington, and are preparing to extend the system to North Kensington, and places adjacent.

For this purpose the high reservoirs at Campden Hill and Kilburn are kept filled by pumping at Kew and Campden Hill.

The Company are also constructing a high-level reservoir on the summit of Hanger Hill, Ealing, for the supply of the higher portions of their district at Ealing and Hanwell.

2. *New works.*—The new works at Hampton are now completed and in operation. They comprise a storage reservoir, holding 45 million gallons of water, three filters capable of filtering 5 million gallons per day, a covered reservoir, containing more than 2 million gallons of filtered water, and a pair of 150 horse-power pumping-engines, with an additional line of 30-inch main.

By means of these works an independent and direct supply is maintained to the whole of the low-level district.

There is also a complete system of underground collection of water on about 20 acres of land adjoining the Hampton Works, with an additional intake from the River Thames, and a pair of pumping engines with three boilers, the whole capable of raising, during times of flood, 12 million gallons of water per day, that has passed through the natural beds of gravel and sand, which are characteristic of the neighbourhood.

The Company have also extended their means for obtaining an increased quantity of water at their Kew and Campden Hill Works to meet exceptional demands, and have connected their reservoirs at those places with the main of the East London Company which leads from Sunbury to Finsbury Park, in order to insure a supply of water from the works of that Company in case of accident or emergency.

They are also making arrangements in concert with the East London Company for connecting the principal mains of the two Companies as far as they run in the same line of route; viz., from Isleworth Corner to Edgware Road. When these connexions are complete, the East London Company's Works at Sunbury will be available on an emergency for the supply of the Grand Junction Company's District, while the whole pumping power of the Grand Junction Company at Hampton, Kew, and Campden Hill could be applied to meet the requirements of the East London Company.

7.—*The Lambeth Waterworks Company.*

1. *Constant supply.*—This Company has for many years past given a constant supply to the various courts and alleys in and about their town district; and also to their outlying districts at Esher and Molesey.

The systematic introduction of constant supply was commenced by this Company in 1878.

Col. Bolton's Report.

The first division thus supplied was the area bounded by the Kennington Park Road from Kennington Park to the "Elephant and Castle," the Walworth Road, and across Grosvenor Park and other streets to the point of commencement in the Kennington Park Road. This district contains 2,216 houses.

The second division supplied comprises the districts of Walworth, Lock's Fields, Old Kent Road, and Bermondsey, and is bounded by the Walworth Road, Newington Causeway, Blackman Street, Long Lane, Grange Road, Willow Walk, Lyton Road, St. James' Road, the Surrey Canal, New Church Road, across Camberwell Road, Avenue Road, and Grosvenor Park to the point of commencement. This district contains 7,404 houses.

The third division supplied comprises the London Road, from the "Elephant and Castle" northwards to the River Thames, the Thames eastwards as far as Southwark Bridge Road, thence southwards along Southwark Bridge Road as far as Great Suffolk Street, Great Suffolk Street eastwards to Blackman Street and Newington Causeway, and southwards to the "Elephant and Castle," all in the parishes of St. Mary, Lambeth, Christchurch, St. Saviour, Southwark, and St. George-the Martyr. This area contains 4,337 houses.

The next division supplied (the Country or A division) comprises Brixton Hill, from the corner of New Park Road, northward to Brixton Rise, thence along Brixton Rise as far as Acre Lane; Acre Lane westward as far as Loat's Road, thence along Loat's Road as far as the junction therewith of Lyham Road; and thence southward behind the houses on the east side of Loat's Road and King's Road (so as to include the houses on both sides of Lyham Road and Upper and Lower Orchard Streets), thence southward behind the houses on the west side of New Park Road as far as Atkins Road; and thence crossing the New Park Road and continuing northward behind the houses on the east side of that road (so as to include the houses on both sides of New Park Road) to Brixton Hill, all in the parishes of Saint Mary, Lambeth, Holy Trinity, Clapham, and St. Leonard's, Streatham. This district contains about 1,530 houses.

The fourth (town) division supplied comprises Kennington Road from the "Horns" Tavern, northward as far as the junction therewith of Lambeth Road; Lambeth Road eastward to Saint George's Circus; then southward along the London Road, Newington Butts, and Kennington Park Road as far as the "Horns" Tavern, all in the parishes of St. Mary, Lambeth, St. George-the-Martyr, and St. Mary, Newington. This district contains 1,835 houses.

Notices were issued to owners and occupiers on the 1st January 1883 for a fifth (town) division of constant-supply in and throughout the district or area bounded by or contained within imaginary lines drawn along or near to the roads, streets, and places following, that is to say, commencing at Camberwell Green, and continuing thence westward behind the houses on the south side of Camberwell New Road (so as to include the houses on both sides of that road) to Kennington Church; thence along the respective centres of the following roads, streets, and places; viz., Harleyford Street, the road running round the south side of Kennington Oval, Harleyford Road to its junction with Upper Kennington Lane, and along Upper Kennington Lane to the River Thames; the River Thames northward as far as Lambeth Road, thence eastward along Lambeth Road as far as the junction therewith of Kennington Road, thence along Kennington Road southward to the "Horns" Tavern, thence crossing the Kennington Park Road and skirting the west, north, and east sides of Kennington Park to Farmer's

Col. Bolton's Report.

Road; thence along Farmer's Road, Grosvenor Terrace, Avenue Road, the London, Chatham, and Dover Railway, and behind the houses on the north side of Wyndham Road to Camberwell Road; and thence southward along the centre of Camberwell Road and High Street, Camberwell, by Camberwell Green to Camberwell New Road, all in the parishes of St. Giles, Camberwell, St. Mary, Lambeth, and St. Mary, Newington. This division contains about 3,900 houses supplied by the Lambeth Company, and will be placed on constant service on the 1st May next.

Plans for a sixth division are in course of preparation, and it has been arranged that by the 1st November 1883, all the houses in the Company's town district (about 23,000) extending from the River Thames as far south as Camberwell New Road will be placed on constant service at high pressure. When this division is laid on, the Company will, of their own Act, and not at the instance of the Metropolitan Board of Works or any other authority, have conferred the benefits of a constant-supply of water upon the poorest and most densely populated part of their district.

The Company are supplying at this date (31st January 1883) 21,410 houses on the constant supply system.

"Deacon's waste meters" are introduced into the first five above mentioned constant-supply divisions, and have been found of great benefit for checking and reducing waste. The fifth (town) division is already planned out for these meters, the fixing of which will at once be proceeded with.

The water pipes and fittings in all new houses are fixed in conformity with the Board of Trade regulations, so as to be ready to receive constant supply when the division of the district in which they are built is brought under it.

The Company have met with considerable opposition from landlords and others, who objected to put the water fittings to their houses in order to receive constant supply, but this opposition has greatly diminished during the past year. Outside stop-cocks are almost a necessity in constant supply districts to enable the Company's workmen to shut off the supply to any house in the event of a leak or repairs, otherwise the whole street or district has to be deprived of its supply while the main is shut down to stop the leak or effect the repairs.

2. *New works.*—A contract for a steam-engine of 180 horse-power, with pumps, boilers, and other appurtenances, was entered into for the purpose of pumping water from the well proposed to be sunk at Bell Green, as alluded to in the Annual Report for 1881.

This well has been abandoned owing to a doubt being raised with regard to the Company's powers to pump water from under lands acquired by them by agreement, and the engine is now being erected at the Thames Ditton Works for the purpose of pumping additional filtered water from there to Brixton. This work is considerably advanced, and will, it is expected, be finished and brought into use during the spring of the present year.

Two additional engines of 120 and 140 horse-power respectively have also been contracted for, and are now in course of erection at the Brixton Works of the Company. The 120 horse engine is intended to work to the highest lifts of the district at Rock Hill, Sydenham, as a duplicate to the present 120 horse engine and the 140 horse is for the purpose of having additional and spare power to pump to the intermediate levels of the district served from Norwood Reservoir.

These engines are being provided, not only to meet the demands arising out of the constant increase of the Company's district, but to

meet the exceptional demands which might occur in case of accident or breakdown to any of the engines during the hot weather of the summer and autumn seasons when the ordinary requirements of the district are at the maximum, especially as regards the extraordinary draught of water for road watering, which always occurs at the period when there is the greatest demand for water for all other purposes throughout the district. *Col. Bolton's Report.*

3. *Hydrants.*—163 hydrants have been fixed by the order and at the cost of the Metropolitan Board of Works.

Besides upwards of 10,486 fire-plugs which have been fixed by the Company and not in any case by the local authorities in the lines of mains, there are 334 road-watering posts available in case of fire, and there are also upwards of 126 hydrants attached to large establishments and public buildings for the same purpose.

4. *Supplies.*—This Company is now (31st January 1883) supplying 73,111 services, representing a population of 511,777; 3,808 additional supplies have been laid on during the twelve months ending the 31st December last, representing an increased population of 26,656.

8.—*The Chelsea Waterworks Company.*

1. *Constant supply.*—This Company are now giving constant supply to 2,824 houses and factories in their district, and they are fully prepared to extend the system as required. All new estates and new lines of streets are being so supplied; though, judging from the very few applications made for such supply, there appears to be no desire on the part of public authorities or private individuals for constant service in this district.

2. *Works.*—This Company have not found it necessary to undertake any new works in the last year. The new mains of large diameter (24 and 18-inch) which they laid down in 1879, have given thorough satisfaction and enable them to give constant supply at the shortest notice whenever required.

This Company's large subsiding reservoirs near Walton and West Molesey enable them to supply effectually filtered water at all times; and the improvement in the quality of the water supplied by them, particularly after floods, which was effected by the construction of these reservoirs, is still maintained.

During the year 1882, I have, in addition to my ordinary duties as Water Examiner, on several occasions been specially appointed to hold inquiries and report upon various matters connected with the water supply of the Metropolis, and also to inquire into and report upon numerous applications and complaints from vestries and private individuals, which were generally adjusted satisfactorily.

Subsequent to the passing of the Act of 1871, the Water Companies have, of their own accord, and in consequence of recommendations from me, incurred and undertaken a considerable expenditure, amounting altogether to 2,990,875*l.* 4*s.* 8*d.* for the improvement of the water supply both in quantity and quality, by extending the storage capacity of their reservoirs, and increasing their areas of filtration, as well as by providing for the requirements of constant supply, by the construction of high-service reservoirs for filtered water, the laying of mains, and the addition of powerful machinery to their works. These measures have tended to improve the supply of water to the Metropolis.

Col. Bolton's Report.

The total certified expenditure of the Companies to 31st December 1882 is shown in the following statement, and amounts to 12,965,873*l.* 17*s.* 9*d.* of this 271,091*l.* 6*s.* 7*d.* has been expended during the past year:—

STATEMENT of the EXPENDITURE of the EIGHT METROPOLITAN WATER COMPANIES on WORKS, IMPROVEMENTS, &c. to 31st December 1882.

Name of Company.	Expenditure to 31st Dec. 1881.	Expended during the Year 1882.	Total certified Expenditure to 31st Dec. 1882.
	£ s. d.	£ s. d.	£ s. d.
1. Kent - - -	640,159 7 11	10,357 12 8	650,517 0 7
2. New River - -	3,188,175 8 6	67,903 7 10	3,256,078 16 4
3. East London - -	2,104,030 8 3	42,095 19 3	2,146,126 7 6
4. Southwark and Vauxhall - -	1,786,679 5 7	12,130 10 3	1,798,809 15 10
5. West Middlesex -	1,055,852 19 11	74,327 18 11	1,130,180 18 10
6. Grand Junction -	1,314,346 2 5	32,593 5 9	1,346,939 8 2
7. Lambeth - -	1,455,334 1 0	29,709 16 0	1,485,043 17 0
8. Chelsea - - -	1,150,204 17 7	1,972 15 11	1,152,177 13 6
TOTAL -	12,694,782 11 2	271,091 6 7	12,965,873 17 9

During the year just ended considerable advance has been made in extending the constant supply to the Metropolis, 202,443 of the total number of 643,752 houses supplied being now on constant service. The following statement shows the number of houses to which constant supply was given on the 31st December 1881 and the 31st December 1882, and the increase during the year. The increase in the number of houses during the year is also shown, and this annual increment must be taken into account in forming any estimate of the time which is likely to elapse before constant supply may become general:—

CONSTANT SUPPLY. NAME OF COMPANY.	1. 1881.	2. Increase during the Year.	3. 1882.	4. Total Number of Houses, 1881.	5. Increase during 1882.	6. Total Number of Houses, 1882.	7. Estimated Population.
Kent - - - -	15,359	4,674	20,533	54,362	3,050	57,412	344,472
New River - - -	18,443	815	19,258	135,454	2,413	137,867	1,000,000
East London - - -	106,043	—	106,043	132,210	5,073	137,283	1,029,622
Southwark and Vauxhall	3,024	138	3,162	95,782	2,616	98,398	731,097
West Middlesex - -	9,121	2,076	11,197	58,827	2,875	61,702	462,765
Grand Junction - -	13,139	5,204	18,343	44,616	1,697	46,313	416,817
Lambeth - - - -	17,256	3,827	21,083	69,123	3,808	72,931	510,517
Chelsea - - - -	2,191	633	2,824	31,213	633	31,846	251,473
Totals - -	185,076	17,367	202,443	621,587	22,165	643,752	4,746,763

Col. Bolton's Report.

The average daily supply during the year, for all purposes, gives a consumption of 30·13 gallons per head of estimated population and 227 gallons per house, as will be seen from the following Table :—

Daily Supply. Name of Company.	Average of the Year.		Maximum.		Minimum.	
	Per Head. Galls.	Per House. Galls.	Month.	Per Head. Galls.	Month.	Per Head. Galls.
Kent - - - - - -	26·56	158	Aug. -	29·14	Nov. -	24·23
New River - - - -	27·62	201	Aug. -	30·44	Feb. -	25·38
East London - - - -	34·49	258	July -	36·11	Nov. -	33·19
Southwark and Vauxhall	27·72	205	July -	29·41	Dec. -	25·86
West Middlesex - - -	25·51	191	June -	27·46	Dec. -	23·40
Grand Junction - - -	30·80	294	June -	35·48	Feb. -	30·16
Lambeth - - - - -	31·59	220	July -	34·42	Dec. -	28·58
Chelsea - - - - -	36·77	290	July -	40·20	Jan. -	33·49
General Average -	30·13	227				

Estimated Population	December 1882 -	4,746,763
Number of Houses - -	December 1882 -	643,752

The chief officer of the Metropolitan Fire Brigade reported to the Metropolitan Board of Works that "the number of fires attended by the "Brigade during 1882 was 1,926, and that the quantity of water used "for extinguishing fires was 16,865,479 gallons, or about 75,292 tons. "Of this quantity about 9,061 tons, or about one-eighth of the whole, "was taken from the river, canals, and docks, and the remainder from "the street pipes.

"During the year there have been 10 cases of short supply of water, "20 of late attendance of turncocks, and 10 of no attendance, making "altogether 40 cases in which the water arrangements were unsatis-"factory."

The number of miles of streets containing mains constantly charged, and on which hydrants could at once be fixed, in each district of the Metropolis, are as follows :—Kent, 85; New River, 214; East London, 85; Southwark and Vauxhall, 117; West Middlesex, 86½; Grand Junction, 37½; Lambeth, 136¾; Chelsea, 67; making a total length of 828¾ miles; while the total number of hydrants erected therein is at present 6,163.

There has been an increase of 78½ miles of mains, and 112 hydrants during the year. The Companies are ready to affix hydrants on these 828¾ miles of mains whenever required to do so.

I have, &c.

Frank Bolton, Colonel,
Water Examiner appointed under the Metropolis Water Act, 1871.

The Right Honourable the
President of the Local Government Board,
Whitehall.

No. 39.

Mr. Stoneham's Report.

Local Government Board, Whitehall, S.W.,
31st December 1882.

SIR,

I BEG leave to forward an abstract of the accounts of the Metropolitan Water Companies for the year ending this date.

No questions calling for any special observations have arisen during the year.

I have, &c.

ALLEN STONEHAM,
Auditor appointed under the Metropolis Water Act, 1871.

The Secretary,
Local Government Board, S.W.

STATEMENT of SHARE and LOAN CAPITAL and of EXPENDITURE FOR WORKS of the METROPOLITAN WATER COMPANIES on the dates mentioned.

DESCRIPTION.	NEW RIVER on 31st Dec. 1882.	EAST LONDON on 31st Dec. 1882.	SOUTHWARK AND VAUXHALL on 30th Sept. 1882.	LAMBETH on 30th Sept. 1882.	GRAND JUNCTION on 30th Sept. 1882.	CHELSEA on 30th Sept. 1882.	WEST MIDDLESEX on 30th Sept. 1882.	KENT on 31st Dec. 1882.	TOTAL.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
SHARE CAPITAL:									
Ordinary - -	2,019,958 0 0	1,695,260 0 0	900,800 0 0	1,270,362 10 0	1,060,000 0 0	615,600 0 0	1,153,740 0 0	678,564 0 0	9,394,284 10 0
Preference 4½ per cent.	..	..	..	..	..	*235,000 0 0	..	..	235,000 0 0
5 „ -	..	..	489,200 0 0	..	..	150,000 0 0	..	..	639,200 0 0
LOAN CAPITAL:									
Bonds 4 per cent. - -	..	..	..	..	..	..	..	42,000 0 0	42,000 0 0
4½ „ - -	..	..	..	11,925 0 0	2,000 0 0	..	..	..	13,925 0 0
4½ „ - -	..	..	..	37,030 0 0	..	..	..	..	37,030 0 0
Debentures 4 per cent. -	1,208,146 0 0	..	77,019 0 0	125,000 0 0	248,000 0 0	..	..	..	1,658,165 0 0
4½ „ -	..	..	94,316 0 0	..	..	..	..	..	94,316 0 0
4½ „ -	..	394,440 0 0	260,665 0 0	..	..	150,100 0 0	..	..	805,205 0 0
TOTAL CAPITAL -	3,228,104 0 0	2,089,700 0 0	1,822,000 0 0	1,444,317 10 0	1,310,000 0 0	1,150,700 0 0	1,153,740 0 0	720,564 0 0	12,919,125 10 0
TOTAL EXPENDITURE FOR WORKS - -	3,256,078 16 4	2,146,126 7 6	1,798,809 15 10	1,485,043 17 0	1,346,989 8 2	1,152,177 13 6	1,130,180 18 10	†725,801 19 4	13,041,158 16 6

* £75,000 convertible into Ordinary Stock in 1882.

† Including £75,284 18*s.* 9*d.* discount on shares issued between 1809–58.

Mr Stoneham's Report.

STATEMENT of RECEIPTS and EXPENDITURE of the METROPOLITAN WATER COMPANIES during the Year ending 31st December 1882.

PARTICULARS OF SERVICE.	NEW RIVER.	EAST LONDON.	SOUTHWARK AND VAUXHALL.	LAMBETH.	GRAND JUNCTION.	CHELSEA.	WEST MIDDLESEX.	KENT.	TOTAL.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Balances, inclusive of Cash Reserves, brought forward	259,506 16 2	61,644 8 0	37,946 15 7	60,033 3 6	46,568 3 0	60,969 17 0	116,200 17 4	57,108 12 10	699,978 13 5
Water Rates receivable	459,321 18 5	238,172 19 11	197,248 11 10	181,601 9 11	162,469 13 5	105,140 17 3	184,619 5 1	106,291 11 5	1,634,866 7 3
Rents and Extra Receipts	8,895 12 2	2,354 18 10	214 9 10	164 8 6	53 16 0	573 4 8	396 10 0	235 17 9	12,888 17 9
Interest	709 1 7	789 16 5	49 17 3	117 18 6	79 14 6	1,371 5 11	1,263 7 6	870 8 9	5,251 10 5
	728,433 8 4	302,962 3 2	235,459 14 6	241,917 0 5	209,171 6 11	168,055 4 10	302,479 19 11	164,506 10 9	2,352,985 8 10
Expenditure for—									
Maintenance of Works and for Pumping	56,056 13 11	* 35,164 15 1	35,167 13 0	40,293 2 0	27,081 0 2	12,220 18 4	22,692 17 0	12,977 4 11	241,654 4 5
Salaries (Engineer's Department)	9,216 3 11	10,123 12 5	7,783 12 8	5,611 4 9	5,784 4 3	4,565 13 4	7,529 6 6	3,029 10 1	53,643 7 11
Rents for Houses and Lands and for Water Rights	16,297 6 7	6,612 6 8	2,513 6 0	2,469 15 0	3,225 15 0	2,300 0 0	3,401 4 0	360 11 0	37,180 4 3
Rates and Taxes	36,586 3 8	22,096 8 10	13,167 18 9	10,232 13 7	10,739 18 4	7,055 5 5	12,681 15 1	5,019 7 7	117,579 11 3
Allowances to Directors	9,282 19 2	2,156 17 6	2,047 18 4	1,843 2 6	1,633 6 8	1,325 0 0	2,451 5 6	2,000 0 0	22,740 9 8
" " Company's Auditors	84 0 0	43 2 9	64 10 3	53 15 9	124 0 0	80 7 11	127 6 11	90 0 0	667 3 7
Salaries (Secretary's Department)	6,466 2 3	2,619 18 5	2,836 0 10	2,100 1 3	3,129 18 2	2,477 13 9	2,948 11 0	1,569 11 7	24,147 17 3
Gratuities and Donations	2,251 1 0	..	..	..	..	..	..	..	2,251 1 0
Superannuation	3,499 3 2	1,555 14 10	400 0 0	1,604 6 10	731 18 6	431 14 6	321 14 2	204 16 0	8,749 8 0
Annuity and Friendly Fund for Workmen	571 15 0	..	..	..	..	..	..	..	571 15 0
Commission to Collectors	13,491 15 8	6,837 6 11	4,380 8 2	4,063 7 0	4,255 1 1	2,417 0 3	4,887 13 10	2,602 15 1	42,935 8 0
Stationery and General Establishment Charges	4,272 9 2	3,404 18 0	1,520 7 4	678 10 3	2,421 16 9	911 11 8	1,386 14 7	693 6 9	15,289 14 6
Fire Premiums	188 10 7	..	..	..	..	..	..	..	188 10 7
Law and Parliamentary	1,700 0 3	553 1 9	2,309 7 11	917 18 9	534 3 7	134 2 6	317 10 6	63 14 10	6,530 0 1
Official Auditor and Water Examiner	348 7 3	224 10 11	200 7 11	157 0 9	136 16 10	128 1 0	118 14 11	78 18 3	1,392 17 10
In respect of a readjustment of Boundary Line—part payment	..	527 0 0	..	..	..	..	..	..	527 0 0
Interests payable on Loan Capital	46,322 15 3	18,495 14 6	18,819 2 2	8,297 10 10	9,953 9 4	6,778 11 1	..	1,687 18 4	110,355 1 6
Dividends paid on Preference Capital	..	..	24,460 0 0	..	..	18,075 0 0	..	..	42,535 0 0
Dividends paid on Share Capital	233,471 1 6	117,208 18 9	61,579 13 10	85,877 0 4	86,960 0 0	41,553 0 0	123,513 9 2	67,339 5 0	817,502 8 7
Losses on Collection of Water Rates written off	31,598 3 8	6,194 0 5	12,330 1 5	11,292 11 5	7,218 5 6	4,779 1 9	8,007 1 9	5,827 15 1	87,247 1 0
Balances, inclusive of Reserves, carried forward	256,728 16 4	69,143 15 5	45,879 5 11	66,424 19 5	45,241 12 9	62,822 3 4	112,094 15 0	60,961 16 3	719,297 4 5
	728,433 8 4	302,962 3 2	235,459 14 6	241,917 0 5	209,171 6 11	168,055 4 10	302,479 19 11	164,506 10 9	2,352,985 8 10
Rate per cent. of Dividend on ordinary Capital for the year	£11 11s. 1·9d.	7	7	7	8¼		10 per cent. and 17,423l. 6s. on account of back dividends.	10	

* Including payment of 1,424l. 10s. 5d. for reconstruction of Middlesex filter beds.

No. 40.

Report on the Analysis of the Waters supplied by the Metropolitan Water Companies during the several Months of the year 1882, by Professor Frankland, D.C.L., F.R.S., &c.

Grove House,
Pembridge Square, W.,
31st January 1883.

Sir,

I have to report to you in the accompanying tables the analytical results obtained in the chemical examination of the water supplied to the inner and portions also of the outer circle of the Metropolis during the year ending December 1882. *Dr. Frankland's Report.*

The inner circle of London was supplied with water by eight companies, the average volume daily delivered being 141,266,549 gallons, being a decrease of nearly 8 millions of gallons upon the previous year. This quantity corresponds to an average daily consumption of 28·6 gallons per head of population. This, although abundant, shows that the water has been used with considerably more economy than during the previous years. Of this supply only 8,823,337 gallons were of uniformly good quality; whilst of the remainder, which was drawn from rivers, 69,947,394 gallons were at times largely polluted with organic matters and 62,495,818 gallons were occasionally so polluted, but to a less extent.

The samples were in all cases taken directly from the mains, at places recommended by the companies themselves, and they were therefore not affected by the deterioration to which water is liable in the cisterns of consumers.

The temperature of each sample at the time of collection, and its appearance in a two-foot tube, have been recorded, and in the case of all turbid samples a microscopic examination has been made of the suspended matter deposited on standing.

Table A. shows the temperature of the waters as they were drawn from the companies' mains. Dividing the waters according to their source into three groups, the following variations in temperature were observed :—

The Thames water supplied by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies varied in temperature from 4°·7 C. (40°·5 Fahr.) in January to 20°·3 C. (68°·5 Fahr.) in August. The water was thus but little removed from its freezing point in winter, whilst its high temperature in summer rendered it vapid and unpalatable.

The water drawn from the Lea and distributed by the New River and East London Companies fluctuated in temperature from 5°·1 C. (41°·2 Fahr.) in December to 19°·2 C. (66°·6 Fahr.) in August. Thus the extremes of temperature observed in the case of this water were almost as great as those noticed in the Thames water.

The deep well water sent out by the Kent and Colne Valley Companies varied in temperature from 6°·5 C. (43°·7 Fahr.) in December to 16°·2 C. (61°·2 Fahr.) in July in the case of the Kent Company's water, whilst that of the Colne Valley Company maintained a constant temperature of 11°·1 C. (52°·0 Fahr.) throughout the year.

Table B. indicates the total amount of solid matters contained in 100,000 parts by weight of each of the waters. Nearly the whole of this solid matter is saline and unobjectionable in drinking water, but the

Dr. Frankland's Report.

water is by it rendered hard and, therefore, not so well adapted for washing and manufacturing purposes.

The deep well water supplied by the Kent Company and by the Tottenham Local Board of Health contained the largest proportion of total solid matters, whilst the water furnished by the Colne Valley Company, although drawn from the same source, contained less than one-third of that present in the above, or less than one-half of that in any of the river waters. This comparative freedom from saline matters is secured by submitting the water to Clark's process of softening, which consists in adding to it a small quantity of slaked lime. Similar treatment would effect an equal improvement in the case of the other water supplied to the Metropolis.

A small proportion, of this solid matter is of an organic nature. Organic matter is always objectionable in water used for drinking, and such matter, when present in river water, is sometimes dangerous to health.

In Tables C. and D. is recorded the proportion of organic impurity as represented by the two most characteristic elements of organic matter—carbon and nitrogen. The importance of these tables is very great, inasmuch as the organic matter present in the waters of the Thames and Lea is to a considerable extent of animal origin. These tables show that, in spite of the very extensive and effective arrangements and apparatus which the water companies drawing from the Thames and Lea have for storage and filtration, the river water supplied to London was, in times of flood, often largely polluted with organic matter and unfit to drink. Taking the mean proportion of organic impurity contained in the Thames water delivered in 1868 as 1,000, I find that in the subsequent years, 1882 included, the following proportions were present:

Year.	Proportion of organic impurity present in Thames water as delivered in London.
1868	1,000
1869	1,016
1870	795
1871	928
1872	1,243
1873	917
1874	933
1875	1,030
1876	903
1877	907
1878	1,056
1879	1,175
1880	1,263
1881	1,007
1882	1,041

From these figures it appears that the water drawn from the Thames in the past year, although somewhat more polluted with organic matters than in 1881, was yet of better quality than in the three years 1878 to 1880.

Dr. Frankland's Report.

The water drawn from the Lea was throughout the year of better average quality than that from the Thames, the New River Company's supply being in nearly every case superior to that of any company drawing from the Thames. The East London Company's supply, although on two occasions superior to that of the New River Company, usually ranked with the better samples of Thames water. Taking, as before, the mean proportion of organic impurity in the Thames water supplied to London in 1868 as 1,000, I find in that and the succeeding years, 1882 included, the following proportions in the Lea water delivered by the New River and East London Companies :

Year.	Proportion of organic impurity present in Lea water as delivered in London.
1868	484
1869	618
1870	550
1871	604
1872	819
1873	693
1874	583
1875	751
1876	562
1877	596
1878	747
1879	954
1880	1,143
1881	868
1882	813

From this comparison it is apparent that, although the pollution of the Lea with organic matters was less in the past year than in the three preceding years, it was yet greater than in any previous year except 1872.

The organic matter present in the deep well waters supplied to London during the last 15 years was, when compared with the same standard :

1868	254
1869	312
1870	246
1871	150
1872	221
1873	250
1874	287
1875	250
1876	246
1877	243
1878	323
1879	387
1880	393
1881	409
1882	377

Dr. Frankland's Report.

Thus the organic matter present in the deep well water was less than one-half that in the Lea and a little more than one-third of that in the Thames water, but the real superiority of the deep well over the river waters is even greater than is indicated by these proportions; for the exhaustive process of natural filtration through a great depth of porous strata which the deep well water has undergone renders it extremely unlikely that any of those organic matters in suspension which are known to be prejudicial to health should have escaped removal, whilst no artificial filtration through sand can insure the same freedom from noxious matters. A great improvement might, however, be effected in the filtration of the river waters if, to the sand already employed, an additional filter-bed of spongy iron were added. The process of filtration through spongy iron has been adopted in Belgium on a large scale with marked success.

Table E. exhibits the proportional amount of organic elements (organic carbon and organic nitrogen) in each of the waters supplied by the various companies; the average amount of these elements contained in the Kent Company's water during the nine years ending December 1876 being taken as unity. According to this Table the maximum, minimum, and average proportions in each of these waters during the year 1882 were as follows:

Sources.		Maximum.	Minimum.	Average.
Deep Wells	Kent	2·0	1·1	1·5
	Colne Valley	1·9	1·3	1·6
	Tottenham	2·6	1·2	1·8
River Lea	New River	4·0	1·3	2·6
	East London	4·7	1·5	3·3
River Thames	Chelsea	5·6	2·3	4·1
	West Middlesex	6·8	3·1	4·5
	Southwark	7·8	2·7	4·5
	Grand Junction	6·2	3·1	4·1
	Lambeth	6·5	2·7	4·0

From the above tables it appears that whereas the deep well water remained of the same excellent quality throughout the year, the quality of the river waters was subject to great fluctuations. Of the deep well waters the best was that supplied by the Kent Company; of the river water abstracted from the Lea, that sent out by the New River Company was the best; whilst of the Thames waters the best average supply was that delivered by the Lambeth Company. Of all the water delivered in London, that supplied by the West Middlesex and Southwark Companies contained, as in the previous year, the greatest average amount of organic impurity.

The following Table shows the maximum amount of organic pollution in the Thames and Lea waters from 1868 to 1882 inclusive, the average of the samples from each source in the month of greatest pollution being taken for comparison:

MAXIMUM AMOUNT of ORGANIC POLLUTION.

Dr. Frankland's Report.

THAMES.			LEA.		
Year.	Elements of organic matter in parts per 100,000.	Months in which maximum pollution occurred.	Year.	Elements of organic matter in parts per 100,000.	Months in which maximum pollution occurred.
1868	·45	January.	1868	·27	February.
1869	·60	February.	1869	·33	February.
1870	·42	January.	1870	·30	January.
1871	·52	October.	1871	·22	February.
1872	·48	Jan. and Dec.	1872	·39	December.
1873	·46	January.	1873	·33	January.
1874	·37	March.	1874	·21	March.
1875	·49	November.	1875	·28	November.
1876	·44	December.	1876	·24	March.
1877	·40	January.	1877	·30	January.
1878	·36	December.	1878	·26	June.
1879	·38	February.	1879	·33	July.
1880	·42	October.	1880	·33	February.
1881	·34	February.	1881	·34	February.
1882	·37	November.	1882	·26	December.

The comparative freedom from excessive organic pollution which has been observed in Thames water since the year 1875 is probably due to the increased storage space acquired by the companies drawing from this source. In consequence of this increased storage capacity it is no longer necessary to impound the worst flood waters.

Tables F. and G. require no comment.

Table H. gives the total weight of combined nitrogen found in the waters; and, after making a small deduction for the average quantity contained in rain water, forms the total evidence of both past and present contamination with nitrogenous organic matters which the waters have experienced. Owing, however, to the quantity of total combined nitrogen being considerably reduced during the summer months by the presence of active vegetable and animal life in the rivers, it is only in the autumn and winter months that it can be regarded as a measure of pollution. During the months of January, February, March, October, November, and December 1878, the average proportion of total combined nitrogen in 100,000 parts of the Thames water was ·270 part; in the same period of 1879 it was ·281, in 1880 ·276, in 1881 ·260, and last year ·258 part. The reduction which has taken place of late years is partly due to the longer storage to which the water is subjected by the companies, and probably to some extent to the processes of partial purification to which much of the sewage discharged into the Thames is now submitted.

In the same quantity of water supplied during the same months from the Lea, the average total combined nitrogen was ·308 part in 1878, ·310 in 1879, ·284 in 1880, ·294 in 1881, and ·304 last year.

The deep well water furnished by the Kent and Colne Valley Companies and by the Tottenham Local Board of Health is not subjected to the influence of animal or vegetable life, and the average of the total

Dr. Frankland's Report.

combined nitrogen may, therefore, be taken on the whole year. In 1878 it was ·446 part, in 1879 ·317 part, in 1880 ·294 part, ·306 in 1881, and last year ·294 part.

Table I. shows the quantity of chlorine found in the various waters respectively. From this table it appears that brackish or tidal water on no occasion gained access to the reservoirs of the water companies.

Table K. exhibits the hardness of the different waters; by which is to be understood the weight of carbonate of lime, or its equivalent of other soap-destroying substances, found in 100,000 parts of water. The average hardness of the Thames water delivered in London was 20°·3 in 1878, 20°·8 in 1879, 20°·2 in 1880, 19°·8 in 1881, and 20°·7 last year; of the Lea, 21°·0 in 1878, 21°·4 in 1879, 20°·3 in 1880, 20°·8 in 1881, and 21°·1 in 1882; of the Kent Company's water 28°·4 in 1878, 28°·4 in 1879, 26°·6 in 1880, 28°·3 in 1881, and 28°·5 in 1882; of the Colne Valley Company's water 7°·3 in 1878, 6°·3 in 1879, 6°·3 in 1880, 6°·2 in 1881, and 5°·5 in 1882; and of the water sent out by the Tottenham Local Board of Health 27°·3 in 1878, 25°·6 in 1879, 22°·2 in 1880, 24°·1 in 1881, and 25°·4 in 1882.

In the operation of washing linen, *soft water* is indispensable, and if the water employed is hard, it requires softening by means of carbonate of soda or soap in the laundry. This process of softening on a small scale is about 80 times more costly than when carried out by a water company. Of all the water delivered in London, only that of the Colne Valley Company was suitable for washing, and this was softened by Clark's process before leaving the company's works.

Lastly, Table L. contains the average, upon the year, of each determination, and thus summarises the average results of the analyses of the water supplied by each company during the year.

In the following Table are recorded the results of my observations respecting the efficiency of the filtration to which the Thames and Lea water was subjected by the several companies during the past year:—

Companies or Local Authorities.	Number of occasions when clear and transparent.	Number of occasions when slightly turbid.	Number of occasions when turbid.	Number of occasions when very turbid.
THAMES.				
Chelsea	7	5	0	0
West Middlesex	8	4	0	0
Southwark	7	5	0	0
Grand Junction	8	4	0	0
Lambeth	4	8	0	0
LEA.				
New River	11	1	0	0
East London	11	1	0	0
DEEP WELLS.				
Kent	12	0	0	0
Colne Valley	12	0	0	0
Tottenham Local Board	9	1	0	0

Thus none of the companies supplying river water furnished water uniformly clear and bright; the water of the New River and East London Companies, however, was only on one occasion slightly turbid.

Dr. Frankland's Report.

The deep well water supplied by the Kent and Colne Valley Companies, and by the Tottenham Local Board of Health, was, with one exception in the case of the Tottenham water, uniformly clear and bright, the process of percolation through a great thickness of chalk dispensing with any necessity for artificial filtration.

The sediment deposited by turbid water on standing is, when examined microscopically, often found to contain living and moving organisms. During the past years such organisms were discovered in the waters of the Lambeth and East London Companies.

The following Table records the results of these microscopic observations during the past 14 years :—

NUMBER of occasions when MOVING ORGANISMS were found.

——	1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.
Chelsea - -	3	2	2	3	2	5	4	4	1	0	2	0	0	0
West Middlesex -	0	0	0	0	0	0	0	0	0	1	2	0	0	0
Southwark - -	8	1	4	1	2	5	5	7	5	3	0	0	0	0
Grand Junction -	4	1	1	2	3	5	7	3	3	3	1	3	3	0
Lambeth - -	5	0	4	6	3	4	5	4	1	1	0	2	1	1
New River - -	0	0	0	0	1	1	0	0	1	0	0	2	0	0
East London -	4	3	3	1	0	2	0	0	0	0	2	0	0	1
Kent - -	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Colne Valley -	–	–	–	–	–	–	–	–	0	0	0	0	0	0
Tottenham - -	–	–	–	–	–	–	–	–	0	0	0	0	0	0

These figures indicate that the companies drawing their supplies from rivers have, of late years, exercised increased care in the treatment and filtration of the water.

I am, &c.
E. FRANKLAND.

The Right Hon.
Sir Charles Wentworth Dilke, Bart., M.P.,
President of the Local Government Board.

TABLE A.

TEMPERATURE (in Centigrade degrees) of the METROPOLITAN WATERS, as delivered from the different Companies' Mains.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	6·0	7·7	9·2	11·2	12·2	14·2	16·2	17·2	14·0	13·5	11·8	6·7	11·7
	West Middlesex	5·7	7·2	11·1	13·2	14·2	16·9	19·2	20·3	16·0	14·1	11·6	6·1	13·0
	Southwark	6·2	7·2	10·2	11·2	14·2	17·2	19·2	19·8	15·8	14·1	11·7	6·0	12·7
	Grand Junction	5·2	6·2	9·7	12·1	14·2	16·2	18·2	18·7	14·8	12·8	11·7	4·7	12·0
	Lambeth	5·0	7·2	8·2	11·2	11·2	15·2	18·2	18·7	14·3	12·4	11·4	5·3	11·5
	LEA.													
	New River	5·7	6·2	9·2	11·2	15·1	16·2	17·7	18·7	15·3	13·9	10·8	5·9	12·2
	East London	5·2	7·2	9·2	11·2	14·7	16·2	17·7	19·2	14·5	13·5	10·8	5·1	12·0
	DEEP WELLS.													
	Kent	10·2	9·7	8·2	10·2	13·2	14·2	16·2	15·7	13·7	11·0	12·4	6·5	11·8
Outer Circle.	Colne Valley	11·1	11·1	11·1	11·1	11·1	11·1	11·1	11·1	11·1	11·1	11·1	11·1	11·1
	Tottenham Local Board	—	—	—	—	—	—	—	—	—	—	—	—	—

TABLE B.

WEIGHT of SOLID MATTERS in 100,000 parts of the WATERS.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	29·98	30·60	31·00	26·16	26·52	25·90	24·70	26·50	25·30	27·78	26·30	29·72	27·54
	West Middlesex	30·56	30·90	30·60	27·20	28·20	26·76	24·40	25·64	26·34	28·06	25·34	30·60	27·88
	Southwark	32·10	31·60	31·28	26·20	27·80	25·90	24·56	25·60	27·44	29·54	26·56	31·64	28·33
	Grand Junction	32·92	32·30	31·06	23·70	27·98	27·02	27·08	27·18	27·72	28·66	27·18	31·58	28·70
	Lambeth	32·08	31·94	32·20	27·60	29·66	26·00	28·50	27·70	28·46	30·22	28·90	32·44	29·47
	LEA.													
	New River	31·76	30·90	30·20	24·80	25·30	24·80	25·40	24·30	26·16	27·84	27·14	31·92	27·54
	East London	36·42	34·00	31·70	27·80	28·60	26·80	26·44	25·50	26·48	27·80	27·02	36·08	29·55
	DEEP WELLS.													
	Kent	43·50	43·50	42·56	43·14	43·62	41·80	40·80	42·40	41·18	43·88	42·84	45·72	42·91
Outer Circle.	Colne Valley	14·28	13·00	10·56	12·24	12·50	12·38	14·80	14·98	12·84	15·50	13·20	13·98	13·35
	Tottenham Local Board	40·20	40·60	—	47·16	39·90	41·28	40·50	39·70	40·32	41·32	—	42·64	43·36

TABLE C.

ORGANIC CARBON in 100,000 parts of the WATERS.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	·243	·108	·285	·184	·223	·194	·170	·166	·112	·282	·178	·269	·199
	West Middlesex	·278	·171	·265	·162	·300	·151	·168	·229	·158	·222	·363	·270	·228
	Southwark	·271	·175	·216	·176	·275	·259	·128	·165	·157	·200	·415	·269	·225
	Grand Junction	·259	·234	·191	·199	·241	·164	·167	·161	·125	·182	·327	·212	·205
	Lambeth	·208	·146	·207	·170	·292	·162	·152	·186	·140	·188	·346	·217	·201
	LEA.													
	New River	·167	·110	·139	·081	·185	·088	·077	·059	·081	·092	·188	·203	·122
	East London	·227	·149	·195	·147	·227	·135	·114	·102	·078	·162	·170	·230	·161
	DEEP WELLS.													
	Kent	·072	·068	·105	·082	·078	·084	·068	·051	·053	·106	·083	·074	·077
Outer Circle.	Colne Valley	·091	·085	·097	·063	·095	·063	·074	·072	·091	·079	·081	·071	·080
	Tottenham Local Board	·082	·089	—	·086	·087	·083	·073	·068	·064	·135	—	·080	·085

TABLE D.

ORGANIC NITROGEN in 100,000 parts of the WATERS.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	·048	·033	·044	·040	·054	·072	·041	·028	·026	·023	·029	·037	·041
	West Middlesex	·039	·059	·037	·033	·056	·031	·047	·036	·022	·023	·042	·038	·039
	Southwark	·046	·040	·044	·032	·047	·054	·030	·027	·037	·026	·046	·047	·040
	Grand Junction	·055	·051	·044	·053	·036	·026	·026	·022	·019	·032	·039	·029	·036
	Lambeth	·047	·053	·054	·034	·036	·030	·034	·018	·017	·022	·038	·037	·035
	LEA.													
	New River	·041	·049	·035	·020	·037	·030	·020	·017	·021	·013	·034	·035	·029
	East London	·037	·064	·049	·030	·042	·027	·019	·018	·010	·024	·024	·041	·032
	DEEP WELLS.													
	Kent	·019	·019	·014	·014	·006	·018	·022	·012	·011	·012	·011	·024	·015
Outer Circle.	Colne Valley	·018	·010	·015	·012	·015	·015	·020	·019	·018	·016	·028	·021	·017
	Tottenham Local Board	·028	·024	—	·024	·020	·025	·022	·025	·008	·017	—	·036	·023

TABLE E.

PROPORTIONAL AMOUNT of ORGANIC ELEMENTS, that in the KENT COMPANY'S WATER during the NINE YEARS ending DECEMBER 1876 being taken as 1.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	4·9	2·4	5·6	3·8	4·7	4·5	3·6	3·3	2·3	4·8	3·5	5·5	4·1
	West Middlesex	5·4	3·9	5·1	3·3	6·0	3·1	3·6	4·5	3·1	4·1	6·8	5·1	4·5
	Southwark	5·4	3·6	4·4	3·5	5·5	5·3	2·7	3·3	3·3	3·8	7·8	5·3	4·5
	Grand Junction	5·3	4·8	4·0	4·3	4·7	3·2	3·3	3·1	2·4	3·6	6·2	4·1	4·1
	Lambeth	4·3	3·4	4·4	3·5	5·6	3·2	3·2	3·5	2·7	3·5	6·5	4·3	4·0
	LEA.													
	New River	3·5	2·7	3·0	1·7	3·8	2·0	1·6	1·3	1·7	1·8	3·8	4·0	2·6
	East London	4·5	3·6	4·1	3·0	4·6	2·7	2·3	2·0	1·5	3·1	3·3	4·7	3·3
	DEEP WELLS.													
	Kent	1·5	1·5	2·0	1·6	1·4	1·7	1·5	1·1	1·1	2·0	1·6	1·6	1·5
Outer Circle.	Colne Valley	1·8	1·6	1·9	1·3	1·9	1·3	1·6	1·5	1·8	1·6	1·8	1·5	1·6
	Tottenham Local Board	1·8	1·9	—	1·9	1·8	1·8	1·6	1·6	1·2	2·6	—	1·9	1·8

TABLE F.

AMMONIA in 100,000 parts of the WATERS.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	0	0	·002	0	0	0	0	0	0	0	0	0	·000
	West Middlesex	0	0	·001	0		0	0	0	0	0	0	0	·000
	Southwark	0	0	0	0	0	0	0	0	0	0	0	0	·000
	Grand Junction	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lambeth	0	0	0	0	0	0	0	0	0	0	0	0	0
	LEA.													
	New River	0	0	0	0	0	0	0	0	0	0	0	0	0
	East London	0	0	0	0	0	0	0	0	0	0	0	0	0
	DEEP WELLS.													
	Kent	0	0	0	·001	0	0	0	0	0	0	0	0	·000
Outer Circle.	Colne Valley	0	0	·008	0	0	0	0	0	0	0	0	0	·001
	Tottenham Local Board	·072	·042	—	·004	·066	·076	·054	·058	·042	·058	—	·064	·054

TABLE G.

NITROGEN, as NITRATES and NITRITES, in 100,000 parts of the WATERS.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	·211	·248	·199	·193	·122	·164	·115	·127	·125	·156	·154	·167	·165
	West Middlesex	·224	·286	·225	·182	·146	·229	·125	·112	·109	·177	·170	·222	·184
	Southwark	·241	·288	·245	·192	·196	·189	·137	·196	·134	·201	·183	·219	·202
	Grand Junction	·229	·224	·235	·148	·182	·197	·160	·173	·169	·193	·141	·214	·189
	Lambeth	·266	·228	·262	·204	·198	·154	·193	·132	·182	·256	·176	·276	·211
	LEA.													
	New River	·327	·332	·300	·231	·191	·176	·143	·154	·178	·204	·305	·255	·233
	East London	·322	·365	·244	·191	·149	·170	·131	·120	·127	·150	·137	·262	·197
	DEEP WELLS.													
	Kent	·439	·488	·424	·487	·400	·295	·484	·395	·419	·478	·401	·429	·428
Outer Circle.	Colne Valley	·369	·376	·282	·369	·371	·333	·348	·302	·358	·349	·298	·445	·350
	Tottenham Local Board	0	0	0	·023	0	0	0	0	0	0	—	0	·002

TABLE H.

TOTAL combined NITROGEN in 100,000 parts of the WATERS.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	·259	·281	·245	·233	·172	·236	·156	·155	·151	·179	·183	·224	·206
	West Middlesex	·263	·345	·263	·215	·202	·260	·172	·148	·131	·200	·212	·262	·222
	Southwark	·287	·328	·289	·224	·243	·243	·167	·223	·171	·227	·229	·266	·241
	Grand Junction	·284	·275	·279	·201	·218	·223	·186	·195	·188	·225	·180	·243	·225
	Lambeth	·313	·281	·316	·238	·234	·184	·227	·150	·199	·278	·214	·313	·246
	LEA.													
	New River	·368	·381	·335	·251	·228	·206	·163	·171	·199	·217	·339	·290	·262
	East London	·357	·429	·293	·221	·191	·197	·150	·138	·137	·174	·161	·303	·229
	DEEP WELLS.													
	Kent	·458	·507	·438	·502	·406	·313	·506	·407	·430	·490	·412	·453	·443
Outer Circle.	Colne Valley	·387	·386	·304	·381	·386	·348	·368	·321	·376	·365	·321	·486	·369
	Tottenham Local Board	·087	·058	—	·050	·074	·087	·066	·072	·042	·065	—	·089	·070

TABLE I.

CHLORINE in 100,000 parts of the WATERS.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	1·5	1·5	1·6	1·5	1·5	1·5	1·5	1·5	1·5	1·5	1·5	1·5	1·5
	West Middlesex	1·5	1·5	1·6	1·5	1·5	1·5	1·4	1·5	1·5	1·5	1·4	1·5	1·5
	Southwark	1·5	1·5	1·6	1·6	1·5	1·5	1·4	1·5	1·4	1·5	1·4	1·5	1·5
	Grand Junction	1·5	1·6	1·6	1·6	1·5	1·4	1·5	1·5	1·5	1·5	1·5	1·5	1·5
	Lambeth	1·5	1·6	1·6	1·6	1·5	1·5	1·4	1·5	1·5	1·6	1·5	1·6	1·5
	LEA.													
	New River	1·6	1·6	1·7	1·6	1·6	1·5	1·5	1·7	1·6	1·6	1·7	1·7	1·6
	East London	1·8	1·8	1·9	1·8	1·8	1·7	1·7	1·9	1·7	1·8	1·8	1·8	1·8
	DEEP WELLS.													
	Kent	2·5	2·5	2·5	2·5	2·6	2·5	2·5	2·5	2·4	2·8	2·8	2·6	2·6
Outer Circle.	Colne Valley	1·5	1·5	1·6	1·5	1·6	1·6	1·5	1·6	1·6	1·7	1·8	1·7	1·6
	Tottenham Local Board	2·9	2·9	—	2·8	2·9	2·9	2·9	3·0	3·0	2·9	—	3·0	2·9

TABLE K.

DEGREES of HARDNESS (1 deg. = 1 part of carbonate of lime, or its equivalent) in 100,000 parts of the WATERS.

	COMPANIES OR LOCAL AUTHORITIES.	1882.												
		Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	22·1	24·2	22·0	20·0	21·5	20·0	18·9	20·0	19·2	18·4	17·7	20·0	20·4
	West Middlesex	22·1	24·2	21·8	19·7	23·1	18·9	18·9	18·3	18·9	18·3	17·4	20·9	20·1
	Southwark	22·4	23·6	22·7	20·6	22·1	19·1	19·1	18·5	19·4	19·4	18·0	21·4	20·5
	Grand Junction	22·4	23·8	21·8	18·6	23·0	19·7	20·3	20·9	18·9	19·1	18·9	21·2	20·7
	Lambeth	22·4	24·8	23·0	21·2	23·6	21·2	21·2	21·8	20·6	19·7	18·6	21·8	21·7
	LEA.													
	New River	21·4	25·0	20·9	20·0	23·6	19·1	18·9	18·9	19·1	19·7	20·0	23·4	20·7
	East London	24·4	25·0	23·9	21·5	25·6	20·3	19·4	18·9	18·3	18·5	18·6	24·2	21·4
	DEEP WELLS.													
	Kent	29·0	29·7	28·1	29·7	29·7	27·5	28·1	27·8	25·7	26·4	28·5	31·4	28·5
Outer Circle.	Colne Valley	6·6	6·3	4·6	5·6	5·6	6·4	7·1	7·4	4·6	5·7	4·6	5·1	5·5
	Tottenham Local Board	25·0	24·3	—	25·0	27·8	25·9	26·5	25·0	26·4	23·5	—	24·3	25·4

TABLE L.

AVERAGES FOR 1882.

The numbers in this Table relate to 100,000 parts of each Water.

	COMPANIES OR LOCAL AUTHORITIES.	Temperature in Centigrade Degrees.	Total Solid Matters.	Organic Carbon.	Organic Nitrogen.	Ammonia.	Nitrogen, as Nitrates and Nitrites.	Total combined Nitrogen.	Chlorine.	Total Hardness.	Proportional Amount of Organic Elements, that in the Kent Company's Water during the nine years ending December 1876 being taken as 1.
		°									
Inner Circle.	THAMES.										
	Chelsea	11·7	27·54	·199	·041	·000	·165	·206	1·5	20·4	4·1
	West Middlesex	13·0	27·88	·228	·039	·000	·184	·223	1·5	20·1	4·5
	Southwark	12·7	28·33	·225	·040	0	·202	·241	1·5	20·5	4·5
	Grand Junction	12·0	28·70	·205	·036	0	·189	·225	1·5	20·7	4·1
	Lambeth	11·5	29·47	·201	·035	0	·211	·246	1·5	21·7	4·0
	LEA.										
	New River	12·2	27·54	·122	·029	0	·233	·262	1·6	20·7	2·6
	East London	12·0	29·55	·161	·032	0	·197	·229	1·8	21·4	3·3
	DEEP WELLS.										
	Kent	11·8	42·91	·077	·015	·000	·428	·443	2·6	28·5	1·5
Outer Circle.	Colne Valley	11·1	13·35	·080	·017	·001	·350	·369	1·6	5·5	1·6
	Tottenham Local Board	—	43·36	·085	·023	·054	·002	·070	2·9	25·4	1·8

Note.—The numbers in these Tables may be converted into grains per imperial gallon by multiplying them by 7, and then moving the decimal point one place to the left.

Appendix C.

Poor Rates, &c.: Receipts and Expenditure.

Page

No. 41. Poor Rate Return.—Remarks on the Annual Poor Rate Return, Year ended Lady-day 1882 - - - - 150

No. 42. Poor Rate Return.—Summary of Poor Rate Returns, Year ended Lady-day 1882 - - - - - - - - 160

No. 43. Expenditure for the Relief of the Poor.—Comparative Statement, Years ended Lady-day 1881 and 1882 - 164

No. 44. Poor Rates levied and expended.—Serial Summary, 41 Years, 1842 to 1882 - - - - - - - - 166

No. 45. Statement of the Six Principal Items which constitute Relief to the Poor.—26 Years, ended with Lady-day 1882 - - - - - - - - - 168

No. 46. Poor Rates levied and expended.—Rate per head and Rate in the £, for 41 Years, 1842 to 1882 inclusive - 169

No. 47. In-maintenance and Out-door Relief.—Remarks, Half-year ended Lady-day 1882 - - - - - - - 170

No. 48. In-maintenance and Out-door Relief. — Comparative Statement, Half-years ended Lady-day 1881 and 1882 - 173

No. 49. In-maintenance and Out-door Relief.—Remarks, Half-year ended Michaelmas 1882 - - - - - 175

No. 50. In-maintenance and Out-door Relief. — Comparative Statement, Half-years ended Michaelmas 1881 and 1882 - 178

No. 41.

Remarks on the Annual Poor Rate Return.

I.—The Poor Rate Return for 1881–82 generally.

Series of Returns.

The present is the *seventy-fifth* annual publication of the Poor Rate Return; it represents the sums levied and expended as Poor Rates throughout the whole of England.

Levy of 1882.

The sum raised by Poor Rates during the year ended Lady-day 1882 was 13,947,681*l.*; the receipts in aid, inclusive of 537,196*l.*, the Treasury subventions, amounted to 970,592*l.*; forming a total receipt of 14,918,273*l.*

Analysis of items of expenditure.

It is to be observed that 5,970,325*l.*, or considerably more than *one-third* of the whole Poor Rate now levied, is expended for "other purposes" than the Relief of the Poor. The figures which represent for 1881–82 the whole expenditure out of the rates are these:—

A.	Relief to the Poor		£8,232,472
B.	Law Charges	£ 28,352	
C.	Purposes wholly unconnected with Relief	5,970,325	
D.	Purposes not accounted for above	633,590	
			6,632,267
	Total		£14,864,739

A. *Relief to the Poor only.*

Total, £8,232,472.

Relief to the Poor, as compared with the previous year.

The following Table shows on comparison of the expenditure of the two years 1880–81 and 1881–82, a slight increase both in the actual amount expended, and in the rate per head of the population:—

Years ended at Lady-day.	Expended for Relief of the Poor.	Increase in 1882 as compared with 1881.	Increase per Cent.	Rate per Head on the Population.	Increased Rate per Head on the Population.
	£	£		*s.* *d.*	*s.* *d.*
1881	8,102,136	130,336	1·6	6 3*	0 0¾
1882	8,232,472			6 3¾	

* This calculation is based on the Census of 1881, according to the preliminary Report.

Increase or decrease in Union-counties.

The difference per cent. in the expenditure for Relief to the Poor, between the year 1882 and the previous year, is shown in the next Table for each Union-county.

Increase per Cent.

Kent (Metropolitan)	21·3	York, West Riding	2·8
Surrey (Metropolitan)	9·3	Oxford	2·7
Middlesex (Metropolitan)	8·7	Sussex	2·3
Middlesex (Extra Metropolitan)	5·4	Dorset	1·7
South Wales	3·9	Surrey (Extra-Metropolitan)	1·5
Nottingham	3·4	Derby	0·7

INCREASE per Cent.—*continued.*

York, East Riding	0·7	Devon	0·1
Kent (Extra-Metropolitan)	0·6	Salop	0·0
Westmorland	0·4		

DECREASE per Cent.

Southampton	0·0	Warwick	1·5
Worcester	0·2	Hunts	1·8
Herts	0·3	Northampton	2·2
Cambridge	0·4	Suffolk	2·4
Somerset	0·4	Rutland	2·4
Hereford	0·6	Gloucester	2·5
Bucks	0·7	Essex	2·7
York, North Riding	0·7	Monmouth	2·7
Stafford	0·8	Berks	2·8
Leicester	0·8	Durham	3·0
Chester	0·9	Cornwall	3·6
Lincoln	1·0	Lancaster	3·7
Wilts	1·3	Northumberland	6·7
Cumberland	1·3	Bedford	6·8
Norfolk	1·4	North Wales	8·8

The total expenditure for Relief, and the constituent amounts, so far as they can be discriminated under six heads, are shown in the next Table, for each division of the Kingdom, during the year ended at Lady-day 1882:— Constituent items of Relief.

DIVISIONS.	TOTAL RELIEF to the POOR.	WHEREOF WAS EXPENDED FOR					
		(*a*) In-Maintenance.	(*b*) Out-Relief.	(*c*) Maintenance of Lunatics in Asylums or Licensed Houses.	(*d*) Workhouse or other Loans Repaid, and Interest thereon.	(*e*) Salaries and Rations of Officers, *including the Sums repaid by Her Majesty's Treasury*, and Superannuations.	(*f*) Other Expenses of, or immediately connected with, Relief.
	£	£	£	£	£	£	£
I. THE METROPOLIS	2,090,753*	569,992	198,757	222,395	145,367	267,268	707,299
II. SOUTH EASTERN	836,697	208,232	251,614	125,422	25,308	138,415	87,706
III. SOUTH MIDLAND	548,176	107,243	232,052	73,601	8,364	76,342	50,574
IV. EASTERN	463,860	92,769	189,651	60,813	5,643	71,809	43,175
V. SOUTH WESTERN	657,602	98,802	338,057	86,304	5,243	85,001	44,195
VI. WEST MIDLAND	827,150	185,815	303,622	121,714	24,012	110,989	80,998
VII. NORTH MIDLAND	422,238	77,828	188,015	63,857	8,475	53,067	30,996
VIII. NORTH WESTERN	891,130	242,410	224,395	115,298	64,319	125,191	119,517
IX. YORK	644,000	127,998	259,823	85,419	34,742	71,617	64,401
X. NORTHERN	388,556	59,713	134,562	52,334	17,779	41,294	32,874
XI. WELSH	512,310	60,793	305,827	52,303	11,951	46,648	34,788
ENGLAND	8,232,472	1,831,595	2,626,375	1,059,460	351,203	1,087,641	1,296,523

* In adjusting the charges for Relief to the Poor in the Metropolis through the Common Poor Fund, the sum taken from the richer Unions usually, as a matter of account varies more or less from the sum allotted to the poorer ones. Consequently the figures in the Column "Total Relief to the Poor" are not the exact aggregate of those in the six columns which follow it. In the parochial year 1882, the payment made through the Common Fund to the poorer Unions was 185,577*l.*; the sum taken from the richer ones was 165,252*l.*; the difference, 20,325*l.*, when deducted from 2,111,078*l.*, which is the total of Columns (*a*) to (*f*), leaves the adjusted total as 2,090,753*l.*

Medical Relief in Unions.

The column in the Return* which succeeds that of "Total Expenditure" shows the sum disbursed by the Poor Law Guardians as *Medical Relief* only, which in the present year amounts to 303,892*l.*; this consists of salaries to the Medical Officers; extra Medical Fees paid to them under the General Consolidated Order; also, the cost (if any) of medical and surgical appliances, and drugs. The sums in this column are not additional to those given in Column headed "Total Relief to the Poor;" because the various items of Medical Relief are included in sub-columns (*e*) or (*f*), as forming a portion of the "Relief to the Poor:" the "Medical Relief" is printed separately, as indicating an important and special subject of Poor Law administration.

Total medical relief.

If to the sum expended by the Poor Law Guardians as Medical Relief be added the disbursements for the same object made by the managers of the other pauper institutions named hereunder, the total will amount to 315,482*l.* for the year:—

	£
Poor Law Unions - - - - -	303,892
District Pauper Schools - - - -	2,190
Metropolitan Asylums District Board - -	6,840
Central London Sick Asylum - - -	1,660
Poplar and Stepney Sick Asylum - -	900
TOTAL MEDICAL RELIEF, 1881–82 -	£315,482

B. and D. *Law Charges and Miscellaneous Expenditure.*

Total, £661,942.

Law and other charges partly connected with relief.

This sum is made up of the "cost of proceedings at Law or in Equity (parochial and union)," 28,352*l.*; "payments under the Parochial Assessment Act, and Union Assessment Committee Acts," 94,860*l.*; and "all other purposes, inclusive of salary, poundage, and superannuations to parochial officers, constables' expenses, and proceedings before magistrates," 538,730*l.*

C. *Expenditure unconnected with Relief to the Poor.*

Total, £5,970,325.

Large proportion of expenditure for purposes unconnected with relief.

This part of the Poor-Rate expenditure, which is entirely foreign to the object originally contemplated in the enactment of the rate, has greatly increased since the passing of the Poor Law Amendment Act in 1834, in consequence of the imposition of new and the augmentation of old charges. The Table at p. 156 exhibits, separately, all the charges referred to, so far as the Returns permit. The heaviest item is the disbursement in respect of the "County, Borough, and Police Rate." The Contributions by the Overseers to the Highway Boards, Rural Sanitary Authorities, to School Boards, and to Burial Boards, are paid out of the Poor Rate and shown in the Poor Rate Returns.

II.—SUBSIDIARY ACCOUNTS OF THE POOR RATE RETURN.

School Districts Accounts.

The sums contributed to the School Districts, and the sums expended by each district during the parochial year 1881–82, are entered in the subjoined Table:—

* See pages 161 and 163, column 26.

RECEIPT and EXPENDITURE of the SCHOOL DISTRICTS, Year ended at Lady-day 1882.

SCHOOL DISTRICTS.	RECEIPTS.				EXPENDITURE.					Loans Outstanding on the 25th March 1882.
	Contributions paid to the District School.	Treasury Repayments.	Other Receipts.	TOTAL.	Maintenance of Children at District School.	School Loans repaid with Interest.	Salaries and Rations of Officers; also Superannuations.	Other Expenses.	TOTAL.	
	£	£	£	£	£	£	£	£	£	£
CENTRAL LONDON -	35,835	1,206	1,474	38,515	16,293	2,235	9,758	6,794	35,080	18,912
WEST LONDON - -	25,055	695	344	26,094	10,200	5,664	4,794	8,008	28,666	56,043
FOREST GATE - -	15,641	859	246	16,746	6,739	2,314	4,634	3,181	16,868	24,512
SOUTH METROPOLITAN	48,130	1,537	1,747	51,414	21,426	4,334	11,566	11,666	48,992	59,622
NORTH SURREY -	25,501	1,185	148	26,834	11,116	3,015	6,095	7,027	27,253	27,190
FARNHAM & HARTLEY WINTNEY -	2,619	169	221	3,009	1,597	429	758	480	3,264	4,699
READING & WOKINGHAM - - -	3,550	321	159	4,030	1,855	287	1,106	794	4,042	3,485
SOUTH EAST SHROPSHIRE - - -	2,404	204	62	2,670	1,396	34	729	390	2,549	—
WALSALL AND WEST BROMWICH - -	5,650	414	334	6,398	3,355	1,585	1,718	1,073	7,731	16,233
KENSINGTON AND CHELSEA - -	17,233	573	335	18,141	6,701	5,006	4,765	2,829	19,301	74,724
BRENTWOOD - -	18,154	621	94	18,869	6,987	3,313	3,458	4,756	18,514	56,110
TOTALS - £	199,772	7,784	5,164	212,720	87,665	28,216	49,381	46,998	212,260	341,530

Metropolitan Asylum Districts Accounts.

The contributions to the Metropolitan Asylum Districts are also accounted for in the Poor Rate Return; these sums are included in the amounts entered in sub-column (*f*), "Other Expenses of, or immediately connected with, Relief," thereby causing a considerable increase in the expenditure under that head.

RECEIPT and EXPENDITURE of the METROPOLITAN ASYLUMS DISTRICT BOARD, and of the SICK ASYLUM DISTRICTS, Year ended Lady-day 1882.

DISTRICTS.	RECEIPTS.				EXPENDITURE.				
	From Contributory Unions.	Treasury Subventions.	Other Sources.	TOTAL.	Maintenance of Imbeciles and Sick Paupers.	Salaries and Rations of Officers; also Superannuations.	Loans and Interest.	All other Expenses.	TOTAL.
	1.	2.	3.	4.	5.	6.	7.	8.	9.
	£	£	£	£	£	£	£	£	£
METROPOLITAN ASYLUMS DISTRICT BOARD - - -	386,125	4,019	1,759	391,903	117,053	88,183	60,499	197,482	463,217
CENTRAL LONDON SICK ASYLUM -	27,898	885	59	28,842	9,904	9,775	5,286	5,217	30,182
POPLAR AND STEPNEY SICK ASYLUM	23,000	497	98	23,595	9,392	6,310	4,017	4,079	23,798
TOTAL - £	437,023	5,401	1,916	444,340	136,349	104,268	69,802	206,778	517,197

Sums contributed by the Metropolitan Unions.

The sum contributed by each Union in the Metropolis to the Asylums District Board during the year ended at Lady-day 1882 is shown hereunder :—

UNIONS.	Contributions paid to the Metropolitan Asylums District Board.	UNIONS.	Contributions paid to the Metropolitan Asylums District Board.
	£		£
Kensington	19,889	Bethnal Green	8,987
Fulham	7,270	Whitechapel	7,651
Paddington	13,561	St. George-in-the-East	4,844
Chelsea	7,824	Stepney	5,635
St. George's	26,152	Mile End Old Town	7,810
Westminster	9,613	Poplar	10,338
St. Marylebone	16,384	St. Saviour's	15,856
Hampstead	4,818	St. Olave's	12,469
St. Pancras	22,792	Lambeth	18,526
Islington	18,970	Wandsworth and Clapham	14,929
Hackney	12,536	Camberwell	13,422
St. Giles and St. George, Bloomsbury	5,383	Greenwich	11,189
		Lewisham	6,402
Strand	8,391	Woolwich	4,575
Holborn	18,189		
City of London	39,100	TOTAL - £	386,125
Shoreditch	12,620		

These subsidiary Accounts have been duly charged to the respective Contributory Unions, and form part of the item "Relief to the Poor."

III.—THE POOR RATE RETURNS DURING THE DECADE 1873–82.

Receipts and Expenditure from 1873 to 1882.

The Returns, in a contracted shape, are exhibited in the next Table, for the last ten years, with the rate per head, on the estimated population, of the amount levied as Poor's Rate, and of the amount expended in relief :—

Years ended at Lady-day.	RECEIPTS.			EXPENDITURE.			RATE per HEAD on Estimated Population.	
	From Poor Rates; *i.e.* Levy.	Receipts in Aid.	TOTAL.	Relief to the Poor only.	All other Purposes.	TOTAL.	Levy only.	Relief to the Poor.
	£	£	£	£	£	£	*s. d.*	*s. d.*
1873	12,190,600	467,343	12,657,943	7,692,169	4,734,397	12,426,566	10 5½	6 7½
1874	12,342,251	461,511	12,803,762	7,664,957	5,186,050	12,851,007	10 5½	6 6
1875	12,483,133	711,313	13,194,446	7,488,481	5,205,727	12,694,208	10 5½	6 3½
1876	12,092,087	813,308	12,905,395	7,335,858	5,301,084	12,636,942	10 0	6 0½
1877	12,049,046	899,128	12,948,174	7,400,034	5,598,203	12,998,237	9 10½	6 0½
1878	12,585,677	904,035	13,489,712	7,688,650	5,926,647	13,615,297	10 2	6 2½
1879	12,913,797	957,321	13,871,118	7,829,819	5,863,365	13,693,184	10 4	6 3½
1880	13,033,655	967,857	14,001,512	8,015,010	6,077,092	14,092,102	10 3½	6 4
1881	13,302,088	1,038,504	14,340,592	8,102,136*	6,288,126	14,390,262	*10 3	*6 3
1882	13,947,681	970,592	14,918,273	8,233,472	6,632,267	14,864,739	10 8	6 3¾

* Calculated on the Census of 1881, according to the Preliminary Report.

The principal heads of expenditure, which constitute "Relief to the Poor," are shown for the ten years in the next Table, together with the average price of wheat.

Constituent items of Relief to the Poor.

Years ended at Lady-day.	EXPENDED FOR RELIEF TO THE POOR. (a) In-Maintenance.	(b) Out-Relief.	(c) Maintenance of Lunatics in Asylums or Licensed Houses.	(d) Workhouse Loans Repaid and Interest thereon.	(e) Salaries and Rations of Officers, *including the Sums repaid by Her Majesty's Treasury*; also, Superannuations.	(f) Other Expenses of, or immediately connected with, Relief.	TOTAL. *	Average Price of Wheat per Imperial Quarter.
	£	£	£	£	£	£	£	s. d.
1873	1,549,403	3,279,122	780,927	272,698	893,218	914,957	7,692,169	57 2
1874	1,649,333	3,110,896	830,454	271,808	909,231	891,815	7,664,957	60 3
1875	1,577,596	2,958,670	859,073	267,337	929,723	896,196	7,488,481	50 11
1876	1,534,224	2,760,804	883,267	275,067	942,581	940,878	7,335,858	45 5
1877	1,613,757	2,616,465	911,426	285,086	972,217	1,001,746	7,400,034	48 2
1878	1,727,340	2,621,786	957,119	287,934	997,308	1,119,638	7,688,650	56 8
1879	1,720,947	2,641,558	986,050	296,533	1,023,197	1,153,308	7,829,819	43 7
1880	1,757,749	2,710,778	994,204	319,426	1,053,218	1,181,511	8,015,010	45 4½
1881	1,838,641	2,660,022	1,033,780	338,419	1,069,188	1,135,286	8,102,136	43 7
1882	1,831,595	2,626,375	1,059,460	351,203	1,087,641	1,296,523	8,232,472	46 2

* The total amounts entered in this column differ from the sum of the items in the six preceding ones, *see* foot-note at p. 151, with regard to 1882.

The sums disbursed in the decade as cost of legal proceedings, as well as the expenditure *partly connected* and *partly unconnected* with Relief to the Poor, are as follows :—

Law and other charges partly connected and partly unconnected with Relief.

Years ended at Lady-day.	Cost of Proceedings at Law (Parochial and Union).	Expenditure not shown in (A.) or (B.) of the Poor Rate Return. Payments under the Parochial Assessment Act and Union Assessment Committee Acts.	All other Purposes, inclusive of Salary, Poundage, and Superannuations to Parochial Officers, Constables Expenses, and Proceedings before Magistrates.	TOTAL.
	£	£	£	£
1873 -	24,068	52,408	563,138	639,614
1874 -	25,582	55,682	536,644	617,908
1875 -	25,429	60,178	524,966	610,573
1876 -	27,162	85,820	537,489	650,471
1877 -	34,805	96,265	523,225	654,295
1878 -	34,135	66,654	544,686	645,475
1879 -	36,301	59,421	570,645	666,367
1880 -	27,787	56,050	577,282	661,119
1881 -	29,644	79,516	600,865	710,025
1882 -	28,352	94,860	538,730	661,942

Expenditure *unconnected* with Relief.

The disbursements from the Poor's Rate for purposes unconnected with Relief are shown for the same decade in the following Summary:

Years ended at Lady-day.	POOR RATE EXPENDITURE FOR PURPOSES *UNCONNECTED* WITH RELIEF.										
	Payments for or towards the County, Borough, and Police Rates.	Payments by Overseers to Highway Boards or Rural Sanitary Authorities for Highways.	Payments by Overseers to Burial Boards.	Contributions by Overseers to the Rural Sanitary Authority for General Expenses.	Contributions by the Overseers to School Boards.	School Attendance Committee Expenses.	Payments on Account of Registration Act, viz., Fees to Clergymen and Registrars, Outlay for Register Offices, Books, and Forms.	Vaccination Fees and Expenses.	Expenses of Parliamentary or Municipal Registration and Costs of Jury Lists.	School Fees for Non-pauper Children.	TOTAL.
	£	£	£	£	£	£	£	£	£	£	£
1873	3,041,808	704,483	—	23,540	62,791	—	80,429	100,557	81,175	—	4,094,783
1874	3,310,416	777,141	—	137,954	99,314	—	80,558	79,111	83,648	—	4,568,142
1875	3,252,656	800,682	—	131,251	160,766	—	83,173	81,579	85,047	—	4,595,154
1876	3,228,770	822,053	—	107,293	232,526	—	92,678	82,088	85,205	—	4,650,613
1877	3,334,020	887,550	—	113,728	339,590	—	93,244	88,402	87,374	—	4,943,908
1878	3,457,952	971,241	—	117,298	429,139	30,655	92,744	92,275	89,868	—	5,281,172
1879	3,232,226	998,142	—	119,252	514,281	59,560	94,160	87,754	91,623	—	,196,998
1880	3,410,327	990,915	—	109,459	571,626	57,571	92,881	86,879	96,315	—	5,415,973
1881	3,588,308	892,223	—	127,794	619,141	55,575	92,674	87,745	98,281	16,360	5,578,101
1882	3,809,992	898,126	103,442	126,657	667,296	57,413	91,585	97,196	100,914	17,704	5,970,325

Burial Board Precepts.

Precepts paid to Burial Board Authorities are now entered in a separate column of the Poor Rate Return.

Valuation to the Poor Rates.

The rateable value of property assessed to the Poor's Rate has now been returned in respect of eighteen parochial years, and the Gross Estimated Rental for fifteen of that series. The earlier figures will be found in preceding issues of this Return, namely, for the parochial years 1841, 1847, 1850, 1856, 1866, 1868, and 1870 to 1872.

In Force on Lady-day.	Poor's Rate Valuation.		YEARS ended with Lady-day.	Amount of Poor Rates levied.	Rate in the £ of Levy on		Expended for Relief to the Poor.	Rate in the £ for Relief on	
	Gross Estimated Rental.	Rateable Value.			Gross Estimated Rental.	Rateable Value.		Gross Estimated Rental.	Rateable Value.
	£	£		£	s. d.	s. d.	£	s. d.	s. d.
1873	132,571,829	112,392,362	1874	12,342,251	1 10·3	2 2·4	7,664,957	1 1·9	1 4·4
1874	136,408,462	115,646,631	1875	12,483,133	1 10·0	2 1·9	7,488,481	1 1·2	1 3·5
1875	140,524,319	119,079,589	1876	12,092,087	1 8·7	2 0·4	7,335,858	1 0·5	1 2·8
1876	146,989,979	124,587,474	1877	12,040,046	1 7·7	1 11·2	7,400,034	1 0·1	1 2·3
1877	150,980,679	127,948,380	1878	12,585,677	1 8·0	1 11·6	7,688,650	1 0·2	1 2·4
1878	154,606,467	131,021,019	1879	12,913,797	1 8·0	1 11·7	7,829,819	1 0·2	1 2·5
1879	157,968,723	133,769,875	1880	13,033,655	1 7·8	1 11·4	8,015,010	1 0·2	1 2·4
1880	160,218,997	135,645,473	1881	13,302,088	1 7·9	1 11·5	8,102,136	1 0·1	1 2·3
1881	165,1 3,300	139,636,307	1882	13,947,681	1 8·3	2 0·	8,232,472	1 0·	1 2·1

IV.—Loans outstanding against Poor Law Authorities.

Loans. The balance of loans effected by the Poor Law Union Authorities under the orders of the Board is now given in the annual Poor Rate Return. According to these figures, the balance at the close of the parochial year 1881–82 was 4,285,282*l.* The total of the rates levied during the currency of the same year was, as before stated, 13,947,681*l.* The outstanding liabilities with regard to loans, therefore, are more than one-fourth of the aggregate levy, but many unions contributory to that levy are free of loan-debt. The balance is shown and the ratios entered for each division of the kingdom hereunder:

DIVISIONS.	Amount of Poor's Rate levied during 1881–82.	Loans effected by the Poor Law Guardians under Orders of the Board. Balance thereof 25th March 1882.	Per Cent. of Outstanding Loan on actual Levy.
	£	£	
I. THE METROPOLIS	2,638,030	1,727,514	65·5
II. SOUTH EASTERN	1,484,962	321,177	21·6
III. SOUTH MIDLAND	1,014,986	107,692	10·6
IV. EASTERN	743,844	112,526	15·1
V. SOUTH WESTERN	1,147,605	54,862	4·8
VI. WEST MIDLAND	1,519,182	279,314	18·4
VII. NORTH MIDLAND	777,254	112,897	14·5
VIII. NORTH WESTERN	1,799,492	701,096	39·0
IX. YORK	1,339,546	518,591	38·7
X. NORTHERN	618,931	209,956	33·9
XI. WELSH	863,849	139,657	16·2
TOTAL OF ENGLAND	13,947,681	4,285,282	30·7

In addition to the loans for which the Guardians are liable, a considerable sum is chargeable to other Poor Law Authorities. All reckoned, the total at Lady-day 1882 amounted to 5,560,720*l.*, in respect of the several authorities set out hereunder, viz., those for,—

	£
Poor Law Unions	4,285,282
District Pauper Schools	341,530
Metropolitan Asylums District Board	835,598
Central London Sick Asylum	58,016
Poplar and Stepney Sick Asylum	40,294
Total	£ 5,560,720

Moneys raised on loan.

The moneys actually received upon loan are not shown in the Returns. The total during the year 1881–82 amounted to 513,562*l.*; of this sum 465,562*l.* was obtained by Poor Law Unions; 17,700*l.* by District Pauper Schools, and 30,300*l.* by the Metropolitan Asylums District Board.

The valuation in force at Lady-day 1881, for assessing the Rate for the Relief of the Poor in each Union will be found in the Local Taxation Returns for 1881–82.

Local Government Board,
13th April 1883.

FREDERICK PURDY,
Principal of the Statistical Department.

No. 42.

POOR RATE RETURN.—SUMMARY of POOR RATE RETURNS for the Year ended LADY-DAY 1882. Population of England 25,968,286 (Census, Preliminary Report, 1881.)

No. 42.—Poor Rate Return.—Summary of Poor Rate Returns for the Year ended

Number.	Divisions and Union-Counties.	Receipts.				Expenditure.						
			In Aid of Poor Rates.			(A.)—Expended for Relief to the Poor, and Purposes connected therewith.						
						I.—Relief to the Poor.						
		From Poor Rates.	Treasury Subventions.	Other Receipts.	Total Receipts.	(a) In-Maintenance.	(b) Out-Relief.	(c) Maintenance of Lunatics in Asylums or Licensed Houses.	(d) Workhouse or other Loans repaid, and Interest thereon.	(e) Salaries and Rations of Officers, *including the Sums repaid by Her Majesty's Treasury*, and Superannuations.	(f) Other Expenses of or immediately connected with Relief.	Total Relief to the Poor.
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	I. THE METROPOLIS.	£	£	£	£	£	£	£	£	£	£	£
1*	Middlesex (part)	1,928,355	72,309	84,490	2,085,154	399,547	123,811	153,142	109,533	195,073	526,322	1,532,946
2*	Surrey (part)	524,850	24,223	27,631	576,704	124,864	45,144	56,285	25,412	55,821	135,930	406,683
3*	Kent (part)	184,825	18,689	6,359	209,873	45,581	29,802	12,968	10,422	16,374	45,047	151,124
	Totals	2,638,030	115,221	118,480	2,871,731	569,992	198,757	222,395	145,367	267,268	707,299	2,090,753*
	II. SOUTH EASTERN.											
2*	Surrey (part)	298,446	13,080	8,064	319,590	43,230	40,870	21,138	6,681	23,336	15,493	150,748
3*	Kent (part)	427,905	22,303	14,940	465,148	59,963	59,102	35,200	6,211	36,301	21,223	218,000
4	Sussex	283,990	13,043	8,636	305,669	43,065	63,435	21,262	4,605	32,082	20,203	184,652
5	Southampton	317,053	17,162	9,340	343,555	43,023	67,147	31,646	5,325	32,244	19,709	199,094
6	Berks	157,568	8,126	4,205	169,899	18,951	21,060	16,176	2,486	14,452	11,078	84,203
	Totals	1,484,962	73,714	45,185	1,603,861	208,232	251,614	125,422	25,308	138,415	87,706	836,697
	III. SOUTH MIDLAND.											
1*	Middlesex (part)	229,719	7,591	6,189	243,490	28,513	30,451	14,910	3,599	14,580	12,867	104,920
7	Hertford	130,335	6,195	2,424	138,954	15,862	33,838	9,441	1,882	11,555	8,610	81,188
8	Buckingham	85,624	5,046	1,625	92,295	9,913	25,564	8,965	150	8,456	4,691	57,739
9	Oxford	117,220	6,078	4,517	127,815	13,493	28,257	11,087	997	11,063	6,277	71,174
10	Northampton	190,623	6,696	2,830	200,149	13,798	46,341	11,651	635	10,473	7,302	90,200
11	Huntingdon	37,840	1,738	1,101	40,679	3,784	6,326	2,391	155	3,176	1,258	17,090
12	Bedford	101,084	4,687	906	106,677	9,134	23,816	6,654	208	7,124	4,194	51,130
13	Cambridge	122,550	5,247	2,047	129,844	12,746	37,459	8,502	738	9,915	5,375	74,735
	Totals	1,014,986	43,278	21,639	1,079,903	107,243	232,052	73,601	8,364	76,342	50,574	548,176
	IV. EASTERN.											
14	Essex	330,220	11,131	9,161	350,512	42,161	66,072	23,271	4,487	26,712	22,152	184,855
15	Suffolk	166,522	9,712	6,574	182,808	21,088	44,687	15,837	757	19,893	11,756	114,018
16	Norfolk	247,102	12,273	6,331	265,706	29,520	78,892	21,705	399	25,204	9,267	164,987
	Totals	743,844	33,116	22,066	799,026	92,769	189,651	60,813	5,643	71,809	43,175	463,860
	V. SOUTH WESTERN.											
17	Wilts	184,601	9,047	4,693	198,341	17,776	42,636	13,440	2,405	16,730	7,265	100,252
18	Dorset	116,713	6,815	3,003	125,531	9,099	36,309	9,237	310	11,058	5,021	71,034
19	Devon	336,342	15,219	8,412	359,973	30,321	110,964	26,175	736	23,324	12,066	203,586
20	Cornwall	175,317	7,594	3,757	186,668	12,009	51,380	13,849	607	9,728	5,704	93,277
21	Somerset	334,632	13,666	6,552	354,850	29,597	96,768	23,603	1,185	24,161	14,139	189,453
	Totals	1,147,605	52,341	25,417	1,225,363	98,802	338,057	86,304	5,243	85,001	44,195	657,602

* This is the Total Expenditure on Relief to the Poor in the Metropolis after adjustment by means of the Metropolitan Common Poor Fund, and is less than the total of the six preceding columns by 20,325*l.*

LADY-DAY 1882. Population of England 25,968,286 (Census, Preliminary Report, 1881).

EXPENDITURE.

II.	(B.)—Expended for Purposes *unconnected* with Relief to the Poor.										(C.) Expenditure not shown in (A.) or (B.)				
Costs of Proceedings at Law (Parochial and Union).	Payments for or towards the County, Borough, or Police Rate.	Payments by Overseers to Highway Boards, or to Rural Sanitary Authorities for Highways.	Payments by Overseers to Burial Boards.	Contributions by the Overseers to Rural Sanitary Authorities for *General Expenses*.	Contributions by the Overseers to the School Boards.	School Attendance Committees Expenses.	Payments on Account of the Registration of Voters, Fees of Overseers and Registrars, Outlay for Register Offices, Books, and Forms.	Vaccination Fees.	Expenses allowed in respect of Parliamentary or Municipal Registration; and Costs of Jury Lists.	Payment of School Fees for Non-Pauper Children.	Payments under Parochial Assessments Act and Union Assessment Committee Acts.	Money expended for all other Purposes.	TOTAL EXPENDITURE.	Medical Relief.	Loan or Loans under Orders of the Board. Balance thereof on 25th March 1882.
12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.
£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
4,171	473,657	..	4,595	..	372	..	8,295	10,761	15,191	12	15,313	74,619	2,139,932	36,484	1,285,331
1,291	140,599	..	1,932	..	..	..	3,282	4,360	4,550	5	8,117	22,399	593,218	11,134	332,120
112	41,658	214	1,580	188	180	..	1,080	1,160	987	106	4,710	6,315	209,414	3,858	110,063
5,574	655,914	214	8,107	188	552	..	12,657	16,281	20,728	123	28,140	103,333	2,942,564	51,476	1,727,514
648	69,474	42,749	4,405	6,565	19,069	2,122	1,449	1,656	1,078	40	2,546	13,811	316,360	7,476	88,887
889	114,273	78,860	4,570	6,110	19,172	3,116	2,402	2,812	2,246	295	2,444	17,974	473,163	9,776	67,849
613	64,638	12,264	1,554	3,257	16,289	1,641	1,752	2,284	1,592	61	2,043	14,371	307,011	9,637	66,071
1,204	72,557	21,752	3,612	5,763	18,178	1,424	2,092	2,041	1,626	96	1,385	10,732	341,556	10,065	79,808
331	45,319	21,160	220	2,199	2,832	1,194	933	1,170	1,022	58	1,016	5,156	166,813	4,759	18,562
3,685	366,261	176,785	14,361	23,894	75,540	9,497	8,628	9,963	7,564	550	9,434	62,044	1,604,903	41,733	321,177
364	80,902	2,991	3,433	1,527	22,652	1,266	1,150	1,863	1,918	86	3,049	14,343	240,464	4,321	70,244
453	35,424	5,011	454	1,851	4,205	1,193	728	796	406	237	301	4,166	136,413	4,048	11,692
125	20,175	..	329	1,677	5,721	778	625	681	641	24	312	3,008	91,835	3,413	129
127	21,963	19,932	524	1,469	3,141	899	680	781	836	83	542	4,021	126,172	4,027	6,332
205	44,028	43,122	1,428	1,398	6,350	799	1,051	1,149	1,211	78	778	5,121	196,918	4,140	6,574
129	10,698	8,295	515	334	1,150	402	182	211	310	27	133	1,066	40,542	852	1,620
179	24,210	11,664	537	1,415	8,337	745	534	617	433	67	542	2,680	103,090	2,682	1,765
97	29,495	184	733	1,316	9,039	512	769	877	933	164	453	4,218	124,125	3,387	9,336
1,679	266,895	91,199	7,953	10,987	61,195	6,594	5,719	6,975	6,688	766	6,110	38,623	1,059,559	26,870	107,692
771	67,153	17,035	1,699	4,648	33,698	1,697	1,952	2,367	1,427	132	2,055	15,707	335,196	9,941	97,302
509	33,126	4,034	880	1,861	11,494	1,195	1,401	1,489	1,109	264	1,268	5,780	178,428	6,838	13,414
228	57,329	233	983	1,913	20,597	1,371	1,663	1,959	1,550	151	2,218	7,301	262,483	8,075	1,810
1,508	157,608	21,302	3,562	8,422	65,789	4,263	5,016	5,815	4,086	547	5,541	28,788	776,107	24,854	112,526
93	31,127	29,366	1,795	6,436	3,908	1,298	1,212	998	947	161	485	4,570	182,548	6,079	26,303
379	25,005	16,713	722	1,431	2,254	781	713	620	570	59	203	3,287	123,771	4,787	1,942
482	58,940	52,604	1,064	2,066	21,201	1,016	2,227	1,896	1,644	76	890	8,464	356,156	8,695	7,698
136	26,625	32,406	798	1,595	18,510	557	1,221	1,031	1,144	123	249	7,081	184,753	3,140	6,048
606	62,148	60,240	4,364	3,379	12,735	1,636	1,702	1,668	1,665	294	905	11,232	352,027	9,201	12,871
1,696	203,845	191,329	8,743	14,907	58,608	5,288	6,975	6,213	5,970	713	2,732	34,634	1,199,255	31,902	54,862

POOR RATE RETURN.—Summary of Poor Rate Returns for the Year ended Lady-day 1882.

Number.	DIVISIONS and UNION-COUNTIES.	RECEIPTS.				EXPENDITURE - - - -						
						(A.)—Expended for Relief to the Poor, and Purposes connected therewith.						
						I.—Relief to the Poor.						
		From Poor Rates.	In Aid of Poor Rates.		Total Receipts.	(*a*) In-Maintenance.	(*b*) Out-Relief.	(*c*) Maintenance of Lunatics in Asylums or Licensed Houses.	(*d*) Workhouse or other Loans repaid, and Interest thereon.	(*e*) Salaries and Rations of Officers, *including the Sums repaid by Her Majesty's Treasury*, and Superannuations.	(*f*) Other Expenses of or immediately connected with Relief.	Total Relief to the Poor.
			Treasury Subventions.	Other Receipts.								
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
	VI. WEST MIDLAND.	£	£	£	£	£	£	£	£	£	£	£
22	Gloucester - -	329,019	11,624	9,520	350,163	40,172	73,780	25,938	1,766	21,368	13,237	176,261
23	Hereford - -	109,091	4,556	1,887	115,534	9,039	18,403	7,301	1,036	7,218	3,483	46,480
24	Salop - - -	139,945	7,507	4,170	151,622	17,740	14,899	13,043	3,159	12,193	7,757	68,791
25	Stafford - -	393,553	12,568	7,291	413,412	53,179	110,579	30,554	4,599	26,646	27,706	253,263
26	Worcester - -	195,964	8,155	6,238	210,357	21,101	33,374	13,117	3,088	13,524	8,082	92,286
27	Warwick - -	351,610	9,379	5,506	366,495	44,584	52,587	31,761	1c,364	30,040	20,733	190,069
	Totals -	1,519,182	53,789	34,612	1,607,583	185,815	303,622	121,714	24,012	110,989	80,998	827,150
	VII. NTH. MIDLAND.											
28	Leicester - -	189,807	7,861	2,719	200,387	18,492	31,427	16,041	1,454	11,890	6,434	85,738
29	Rutland - -	15,576	619	383	16,578	1,694	3,672	940	..	1,144	473	7,923
30	Lincoln - -	242,426	8,560	6,217	257,203	23,487	79,170	16,747	1,508	17,174	8,661	146,747
31	Nottingham -	158,563	6,043	3,289	167,895	17,466	35,170	16,922	1,928	12,467	10,060	94,013
32	Derby - - -	170,882	7,373	2,593	180,848	16,689	38,576	13,207	3,585	10,392	5,368	87,817
	Totals - -	777,254	30,456	15,201	822,911	77,828	188,015	63,857	8,475	53,067	30,996	422,238
	VIII. NTH. WESTERN.											
33	Chester - -	292,516	10,892	9,998	313,406	29,006	50,220	21,667	6,498	18,593	11,189	137,173
34	Lancaster - -	1,506,976	32,411	56,676	1,596,063	213,404	174,175	93,631	57,821	106,598	108,328	753,957
	Totals - -	1,799,492	43,303	66,674	1,909,469	242,410	224,395	115,298	64,319	125,191	119,517	891,130
	IX. YORKSHIRE.											
35	West Riding -	1,007,995	27,305	40,769	1,076,069	92,607	188,618	60,598	30,406	50,852	49,943	473,024
36	East Riding -	161,974	5,090	5,195	172,259	19,994	34,885	13,237	1,061	10,227	8,039	87,443
37	North Riding -	169,577	5,519	1,942	177,038	15,397	36,320	11,584	3,275	10,538	6,419	83,533
	Totals - -	1,339,546	37,914	47,906	1,425,366	127,998	259,823	85,419	34,742	71,617	64,401	644,000
	X. NORTHERN.											
38	Durham - -	316,614	10,637	7,875	335,126	30,042	67,931	22,843	10,324	19,046	16,874	167,060
39	Northumberland -	174,504	9,113	7,157	190,774	16,319	39,208	17,285	4,722	13,182	9,253	99,969
40	Cumberland -	103,874	4,315	2,737	110,926	10,256	22,029	9,346	2,351	6,229	4,647	54,858
41	Westmorland -	23,939	1,509	2,223	27,671	3,096	5,394	2,860	382	2,837	2,100	16,669
	Totals - -	618,931	25,574	19,992	664,497	59,713	134,562	52,334	17,779	41,294	32,874	338,556
	XI. WELSH.											
42	Monmouth - -	136,098	7,505	2,565	146,168	13,101	37,851	10,946	2,515	7,169	6,934	78,516
43	South Wales -	479,529	14,015	8,875	502,419	31,028	172,153	30,929	7,467	24,751	18,776	285,104
44	North Wales -	248,222	6,970	4,784	259,976	16,664	95,823	10,428	1,969	14,728	9,078	148,690
	Totals - -	863,849	28,490	16,224	908,563	60,793	305,827	52,303	11,951	46,648	34,788	512,310
	TOTALS of England - -	13,947,681	537,196	433,396	14,918,273	1,831,595	2,626,375	1,059,460	351,203	1,087,641	1,296,523	8,232,472*
												£

* Totals of England—*see* foot-note, p. 151, as to this sum being less than the total of the six preceding columns by 20,825*l.*

† Medical Relief.—Adding the expenditure for the same purpose by the Asylums and District Schools (*see* ante), p. 152, makes the total 315,482*l.*

‡ Loans Outstanding.—The total outstanding, when all the Poor Law Authorities are reckoned, is 5,560,720*l.* (*see* ante), p. 157.

Population of England 25,968,286 (Census, Preliminary Report, 1881)—*continued.*

EXPENDITURE.

II. Costs of Proceedings at Law (Parochial and Union).	(B.)—Expended for Purposes *unconnected* with Relief to the Poor: Payments for or towards the County, Borough, or Police Rate.	Payments by Overseers to Highway Boards, or to Rural Sanitary Authorities for Highways.	Payments by Overseers to Burial Boards.	Contributions by the Overseers to Rural Sanitary Authorities for *General Expenses.*	Contributions by the Overseers to the School Boards.	School Attendance Committees Expenses.	Payments on Account of the Registration Act, viz., Fees to Clergymen and Registrars, Outlay for Register Offices, Books, and Forms.	Vaccination Fees.	Expenses allowed in respect of Parliamentary or Municipal Registration; and Cost of Jury Lists.	Payment of School Fees for Non-Pauper Children.	(C.) Expended for Purposes *partly connected* and *partly unconnected* with Relief to the Poor: Payments under Parochial Assessments Act and Union Assessment Committee Acts.	Money expended for all other Purposes.	TOTAL EXPENDITURE.	Medical Relief.	Loan or Loans under Orders of the Board. Balance thereof on 25th March 1883.
12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.
£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
483	95,769	36,776	1,577	2,378	9,714	1,334	2,159	1,733	2,660	407	859	13,631	345,741	7,108	9,994
288	27,161	25,368	268	1,140	3,477	633	419	514	419	80	283	4,306	110,836	2,726	12,569
40	31,229	31,049	1,617	1,664	4,307	787	998	987	1,106	68	904	5,376	148,923	3,833	46,016
288	87,817	64	755	2,101	42,720	988	3,488	3,643	3,279	1,134	4,740	15,579	419,859	6,938	42,607
194	64,303	11,289	2,466	1,397	14,627	706	1,247	1,393	1,340	157	1,064	8,035	200,504	4,870	34,826
1,238	143,052	6,775	2,023	2,831	6,171	1,251	2,545	3,138	2,127	149	934	10,361	372,664	7,579	‡33,302
2,531	449,331	111,321	8,706	11,511	81,016	5,699	10,856	11,408	10,931	1,995	8,784	57,288	1,598,527	33,054	279,314
129	62,566	32,950	1,674	2,652	6,642	873	1,234	1,297	1,081	80	1,160	5,373	203,449	3,534	11,913
13	3,944	2,004	111	360	325	122	89	170	154	30	241	461	15,947	390	..
345	54,546	9,662	2,002	3,354	13,252	1,959	1,771	1,888	2,252	156	2,161	10,318	250,413	6,054	22,551
466	27,438	25,173	684	1,492	11,226	532	1,801	1,802	2,026	216	817	5,585	173,271	3,685	27,979
268	47,601	3,095	3,285	9,218	16,455	806	1,332	1,538	1,304	307	1,987	5,329	180,342	2,873	50,454
1,221	196,095	72,884	7,756	17,076	47,900	4,292	6,227	6,695	6,817	789	6,366	27,066	823,422	16,536	112,897
2,851	111,547	37,778	1,058	2,342	4,396	1,898	2,088	2,336	2,153	801	1,278	15,605	323,304	4,690	82,280
2,684	621,860	35,315	16,250	7,288	39,598	7,468	11,914	10,170	13,752	7,006	9,938	55,181	1,592,381	26,933	618,816
5,535	733,407	73,093	17,308	9,630	43,994	9,366	14,002	12,506	15,905	7,807	11,216	70,786	1,915,685	31,623	701,096
1,923	365,408	30,424	12,071	4,664	61,309	2,813	7,485	6,078	8,969	2,110	8,036	41,186	1,025,500	14,104	448,445
63	57,072	3,239	920	1,287	6,149	483	1,379	1,042	933	432	196	7,315	167,953	3,010	18,965
64	29,215	34,483	2,514	1,961	7,394	763	1,329	1,393	1,088	144	742	5,052	169,675	3,687	51,181
2,050	451,695	68,146	15,505	7,912	74,852	4,059	10,193	8,513	10,990	2,686	8,974	53,553	1,363,128	20,801	518,591
369	80,159	30,898	2,833	3,969	28,741	1,671	3,072	3,260	2,748	820	841	15,714	342,155	4,576	130,810
310	44,995	8,773	3,105	7,032	10,394	826	1,361	1,577	1,281	256	488	7,033	187,400	2,952	49,369
90	32,908	7,288	2,340	1,705	11,478	588	856	910	748	181	1,090	3,881	118,921	1,743	23,961
85	8,038	..	46	825	1,260	276	219	196	170	42	64	755	28,645	832	5,816
854	166,100	46,959	8,324	13,531	51,873	3,361	5,508	5,943	4,947	1,299	2,483	27,383	677,121	10,103	209,956
750	27,463	12,195	370	1,018	18,061	433	801	1,067	788	36	283	5,091	146,872	2,133	28,932
370	90,906	13,650	2,038	4,471	63,415	3,394	3,407	4,025	3,235	240	2,343	20,044	496,702	7,136	88,805
899	44,472	19,049	709	3,110	24,501	1,167	1,536	1,792	2,265	153	2,454	10,097	260,894	5,671	21,920
2,019	162,841	44,894	3,117	8,599	105,977	4,994	5,804	6,884	6,288	429	5,080	35,232	904,468	14,940	139,657
28,352	3,809,992	898,126	103,442	126,657	667,296	57,413	91,585	97,196	100,914	17,704	94,860	538,730	14,864,739	303,892†	4,285,282 ‡
8,260,824	£5,970,325										£633,590				
	£14,864,739.														

No. 43.—Comparative Statement of the Expenditure for the Relief of the Poor in Population, 25,968,286

DIVISIONS and UNION-COUNTIES.	Population 1881. (Preliminary Census.)	EXPENDED FOR RELIEF OF THE POOR. Years ended Lady-day		DIFFERENCE between 1882 and 1881.		DIFFERENCE per CENT.	
		1881.	1882.				
I. THE METROPOLIS.		£	£	Incr. £	Decr. £	Incr.	Decr.
1.*Middlesex (part)	2,548,993	1,410,646	1,532,946	122,300	—	8·7	—
2.*Surrey (part)	980,218	371,922	406,683	34,761	—	9·3	—
3.*Kent (part)	285,360	124,587	151,124	26,537	—	21·3	—
Totals	3,814,571	1,907,155	2,090,753	183,598	—	9·6	—
II. SOUTH EASTERN.							
2.*Surrey (part)	460,799	148,501	150,748	2,247	—	1·5	—
3.*Kent (part)	707,936	216,665	218,000	1,335	—	0·6	—
4. Sussex	494,027	180,453	184,652	4,199	—	2·3	—
5. Southampton	575,451	199,101	199,094	—	7	—	0·0
6. Berks	247,938	86,609	84,203	—	2,406	—	2·8
Totals	2,486,151	831,329	836,697	5,368	—	0·6	—
III. SOUTH MIDLAND.							
1.*Middlesex (part)	380,685	99,559	104,920	5,361	—	5·4	—
7. Hertford	202,315	81,473	81,188	—	285	—	0·3
8. Buckingham	155,885	58,141	57,739	—	402	—	0·7
9. Oxford	181,564	69,330	71,174	1,844	—	2·7	—
10. Northampton	277,002	92,192	90,200	—	1,992	—	2·2
11. Huntingdon	53,218	17,408	17,090	—	318	—	1·8
12. Bedford	154,249	54,843	51,130	—	3,713	—	6·8
13. Cambridge	191,123	75,000	74,735	—	265	—	0·4
Totals	1,596,041	547,946	548,176	230	—	0·0	—
IV. EASTERN.							
14. Essex	551,765	189,974	184,855	—	5,119	—	2·7
15. Suffolk	353,509	116,829	114,018	—	2,811	—	2·4
16. Norfolk	437,649	167,317	164,987	—	2,330	—	1·4
Totals	1,342,923	474,120	463,860	—	10,260	—	2·2
V. SOUTH WESTERN.							
17. Wilts	248,644	101,552	100,252	—	1,300	—	1·3
18. Dorset	184,936	69,839	71,034	1,195	—	1·7	—
19. Devon	609,157	203,289	203,586	297	—	0·1	—
20. Cornwall	325,205	96,717	93,277	—	3,440	—	3·6
21. Somerset	490,504	190,231	189,453	—	778	—	0·4
Totals	1,858,446	661,628	657,602	—	4,026	—	0·6
VI. WEST MIDLAND.							
22. Gloucester	525,123	180,855	176,261	—	4,594	—	2·5
23. Hereford	118,148	46,751	46,480	—	271	—	0·6
24. Salop	265,707	68,783	68,791	8	—	0·0	—

the UNION-COUNTIES of ENGLAND for the Years ended at LADY-DAY 1881 and 1882. (Preliminary Census 1881).

DIVISIONS and UNION-COUNTIES.	Population 1881. (Preliminary Census.)	EXPENDED FOR RELIEF OF THE POOR. Years ended Lady-day		DIFFERENCE between 1882 and 1881.		DIFFERENCE per CENT.	
		1881.	1882.				
VI. WEST MIDLAND—*cont.*		£	£	Incr. £	Decr. £	Incr.	Decr.
25. Stafford	1,006,741	255,353	253,263	—	2,090	—	0·8
26. Worcester	383,188	92,459	92,286	—	173	—	0·2
27. Warwick	730,455	193,028	190,069	—	2,959	—	1·5
Totals	3,029,362	837,229	827,150	—	10,079	—	1·2
VII. NORTH MIDLAND.							
28. Leicester	326,006	86,387	85,738	—	649	—	0·8
29. Rutland	23,007	8,116	7,923	—	193	—	2·4
30. Lincoln	463,367	148,184	146,747	—	1,437	—	1·0
31. Nottingham	438,712	90,949	94,013	3,064	—	3·4	—
32. Derby	386,532	87,210	87,817	607	—	0·7	—
Totals	1,637,624	420,846	422,238	1,392	—	0·3	—
VIII. NORTH WESTERN.							
33. Chester	621,544	138,453	137,173	—	1,280	—	0·9
34. Lancaster	3,485,611	782,766	753,957	—	28,809	—	3·7
Totals	4,107,155	921,219	891,130	—	30,089	—	3·3
IX. YORK.							
35. West Riding	2,197,811	459,983	473,024	13,041	—	2·8	—
36. East Riding	362,390	86,863	87,443	580	—	0·7	—
37. North Riding	334,326	84,109	83,533	—	576	—	0·7
Totals	2,894,527	630,955	644,000	13,045	—	2·1	—
X. NORTHERN.							
38. Durham	875,507	172,174	167,060	—	5,114	—	3·0
39. Northumberland	434,024	107,107	99,969	—	7,138	—	6·7
40. Cumberland	250,630	55,571	54,858	—	713	—	1·3
41. Westmorland	64,307	16,597	16,669	72	—	0·4	—
Totals	1,624,468	351,449	338,556	—	12,893	—	3·7
XI. WELSH.							
42. Monmouth	234,440	80,660	78,516	—	2,144	—	2·7
43. South Wales	881,263	274,469	285,104	10,635	—	3·9	—
44. North Wales	461,315	163,131	148,690	—	14,441	—	8·8
Totals	1,577,018	518,260	512,310	—	5,950	—	1·1
TOTALS of England	25,968,286	8,102,136	8,232,472	130,336	—	1·6	—

*** The Summary of the Poor Rate Return in separate Unions will be found in the Annual Local Taxation Returns (England) for the year 1881–82.

No. 44.—Statement of the Sums Levied as Poor Rates; the Receipts in aid of Poor Rates; ended at **Lady-day 1842 to 1882** inclusive; also the

Years ended Lady-day.	RECEIPTS. From Poor Rates.	Receipts in aid of Poor Rates.	Total Receipts.	EXPENDITURE — A.—Expended for Relief, and Purposes *connected* therewith. Amount Expended for the Relief of the Poor.	Costs of Proceedings at Law or in Equity.	B.—Expended for Purposes *unconnected* Payments towards the County, Borough, or Police Rate.	Payments by Overseers to Highway Boards, under 27 & 28 Vict. c. 101. s. 33.	Constables' Expenses, and Cost of Proceedings before Justices.
	(1.)	(2.)	(3.)	(4.)	(5.)	(6.)	(7.)	(8.)
	£	£	£	£	£	£	£	£
1842	6,552,890	201,514	6,754,404	4,911,498	68,051	1,230,718	..	..
1843	7,085,595	219,066	7,304,601	5,208,027	84,730	1,295,616	..	..
1844	6,847,205	219,592	7,066,797	4,976,093	105,304	1,356,457	..	..
1845	6,791,006	218,508	7,009,511	5,039,703	95,397	1,279,962	..	57,988
1846	6,800,623	187,043	6,988,666	4,954,204	83,298	1,297,505	..	52,240
1847	6,964,825	152,527	7,117,352	5,298,787	76,385	1,334,770	..	51,565
1848	7,817,430	158,664	7,976,094	6,180,764	73,439	1,391,376	..	58,265
1849	7,674,146	199,751	7,873,897	5,792,963	70,252	1,381,132	..	62,776
1850	7,270,493	230,002	7,500,495	5,395,022	77,582	1,321,035	..	65,120
1851	6,778,914	181,408	6,960,322	4,962,704	68,545	1,392,509	..	61,259
1852	6,552,298	318,070	6,870,368	4,897,685	62,830	1,344,798	..	60,325
1853	6,522,412	282,971	6,805,383	4,939,064	52,818	1,406,173	..	55,376
1854	6,973,220	278,061	7,251,281	5,282,853	46,569	1,481,881	..	56,514
1855	7,864,149	310,805	8,174,954	5,890,041	51,503	1,598,401	..	58,342
1856	8,201,348	295,110	8,496,458	6,004,244	53,544	1,577,359	..	61,006
1857	8,139,003	301,987	8,440,990	5,898,756	59,164	1,776,944	..	59,396
1858	8,188,880	303,240	8,492,120	5,878,542	60,473	1,916,273	..	50,043
1859	8,108,222	326,566	8,434,788	5,558,689	65,088	1,915,255	..	46,059
1860	7,715,948	317,578	8,033,526	5,454,964	61,139	1,936,549	..	42,083
1861	7,921,619	330,549	8,252,168	5,778,943	59,509	1,925,210	..	43,566
1862	8,511,161	327,829	8,838,990	6,077,525	56,783	2,026,916	..	45,162
1863	9,174,976	337,679	9,512,655	6,527,036	49,793	2,075,468	..	43,273
1864	9,448,319	426,250	9,874,569	6,423,381	43,290	2,163,290	..	41,609
1865	9,392,191	376,951	9,769,142	6,264,966	47,065	2,133,290	550,976	41,830
1866	9,573,772	384,478	9,958,250	6,439,517	42,153	2,209,184	578,494	40,868
1867	10,303,665	388,523	10,692,188	6,959,840	26,999	2,511,511	595,699	38,132
1868	11,054,513	418,330	11,472,843	7,498,059	28,832	2,456,578	614,893	36,281
1869	11,363,656	412,497	11,776,153	7,673,100	24,526	2,564,735	658,469	42,823
1870	11,573,608	470,404	12,044,012	7,644,307	27,002	2,587,896	652,591	43,873
1871	11,610,920	510,520	12,121,440	7,886,724	18,079	2,708,840	648,846	37,244
1872	12,100,490	508,448	12,608,938	8,007,403	26,196	2,798,344	658,489	34,743
1873	12,190,600	467,343	12,657,943	7,692,169	24,068	3,041,808	704,483	*
1874	12,342,251	461,511	12,803,762	7,664,957	25,582	3,310,416	777,141	*
1875	12,483,133	†711,313	13,194,446	7,488,481	25,429	3,252,656	800,682	*
1876	12,092,087	‡813,308	12,905,395	7,335,858	27,162	3,228,770	822,053	*
1877	12,049,046	¶899,128	12,948,174	7,400,034	34,805	3,334,020	887,550	*
1878	12,585,677	**904,035	13,489,712	7,688,650	34,135	3,457,952	971,241	*
1879	12,913,797	††957,321	13,871,118	7,829,819	36,301	3,232,226	998,142	*
1880	13,033,655	‡‡967,857	14,001,512	8,015,010	27,787	3,410,327	990,915	*
1881	13,302,088	¶¶1,038,504	14,340,592	8,102,136	29,644	3,588,308	892,223	*
1882	13,947,681	***970,592	14,918,273	8,232,472	28,352	3,809,992	898,126	*

* Col. (8.)—These expenses now included in Col. (13).

† Col. (2.)—Inclusive of 350,355*l.*
‡ Col. (2.)—Inclusive of 496,741*l.*
¶ Col. (2.)—Inclusive of 560,477*l.*
** Col. (2.)—Inclusive of 547,351*l.*
†† Col. (2.)—Inclusive of 574,809*l.*
‡‡ Col. (2.)—Inclusive of 555,560*l.*
¶¶ Col. (2.)—Inclusive of 617,631*l.*
*** Col. (2.)—Inclusive of 537,196*l.*

} Treasury Subventions, and Payments in respect of Government Property.

the Total Amount Expended for Relief to the Poor, and for other Purposes, in England, for the Years Expenditure for Medical Relief only, during the same Years.

EXPENDITURE.										
with Relief to the Poor.			C.—Expenditure not shown in A or B.			Difference per Cent. between each Year in the Amount of Relief to the Poor.		Average Price of Wheat per Imperial Quarter.		Expended for Medical Relief only (included in "Amount expended for the Relief of the Poor").	Years ended Lady-day.
Payments on Account of the Registration Act, viz., Fees to Clergymen and Registrars; Outlay for Register Offices, Books, and Forms.	Vaccination Fees and Expenses.	Expenses allowed in respect of Parliamentary or Municipal Registration, and Cost of Jury Lists.	Payments under the Parochial Assessment's Act, for Surveys, Valuations, &c., and Loans repaid under the same.	Money Expended for all other Purposes.	Total Expenditure.						
(9.)	(10.)	(11.)	(12.)	(13.)	(14.)	(15.)		(16.)		(17.)	
£	£	£	£	£	£	Increase.	Decrease	*s.*	*d.*	£	
52,379	33,744	..	40,178	375,203	6,711,771	3·2	—	64	0	153,481	1842
53,896	16,425	..	30,420	346,007	7,035,121	6·0	—	54	4	160,726	1843
56,094	16,980	..	30,083	359,106	6,990,117	—	4·5	51	5	166,257	1844
57,388	25,905	20,153	22,877	258,029	6,857,402	1·3	—	49	2	174,330	1845
54,821	27,447	21,556	21,162	234,352	6,746,585	—	1·7	53	3	175,190	1846
59,328	18,115	25,041	17,289	213,377	7,094,657	7·0	—	59	0	179,526	1847
56,982	21,965	24,329	14,115	226,250	8,047,485	16·6	—	64	6	197,954	1848
57,200	29,375	28,564	15,282	273,074	7,710,617	—	6·3	49	1	211,181	1849
58,637	23,642	28,773	14,196	376,204	7,360,221	—	6·9	42	7	227,171	1850
56,676	25,248	28,257	14,409	309,800	6,919,407	—	8·0	39	11	209,993	1851
58,960	25,895	30,533	12,500	325,820	6,819,346	—	1·3	39	4	212,050	1852
60,810	27,576	30,994	12,433	269,545	6,854,788	0·8	—	42	0	215,054	1853
60,339	45,729	31,622	12,440	299,983	7,317,930	7·0	—	61	7	230,777	1854
65,119	54,727	31,418	10,997	328,838	8,089,387	11·5	—	70	0	231,682	1855
63,873	44,503	31,247	12,740	363,496	8,212,012	1·9	—	75	4	231,872	1856
63,850	41,256	32,767	13,785	393,294	8,339,212	—	1·8	65	3	231,623	1857
64,978	40,761	32,466	16,484	389,638	8,449,658	—	0·3	53	10	230,597	1858
66,441	46,472	32,301	15,922	403,228	8,149,455	—	5·4	42	9	233,124	1859
67,917	46,006	34,226	16,705	416,315	8,075,904	—	1·9	44	9	236,339	1860
66,992	47,730	34,910	15,043	423,309	8,395,212	5·9	—	55	10	238,233	1861
67,633	42,520	35,976	14,687	438,475	8,806,074	5·2	—	56	7	242,200	1862
69,130	45,662	36,586	19,345	458,779	9,325,072	7·4	—	52	1	248,286	1863
72,946	62,653	37,509	42,864	792,938	9,680,480	—	1·6	43	2	253,204	1864
74,861	58,524	38,974	63,438	518,234	9,792,158	—	2·5	39	8	259,833	1865
75,563	55,818	37,715	58,035	451,773	9,989,120	2·8	—	43	6	264,052	1866
74,239	44,815	39,637	54,522	559,779	10,905,173	8·8	—	53	7½	272,225	1867
73,826	50,987	39,199	49,734	532,204	11,380,593	7·7	—	67	6½	272,341	1868
76,735	64,378	71,213	47,119	550,901	11,773,999	2·3	—	57	8¾	282,115	1869
76,098	63,573	69,467	46,827	525,979	11,737,613	—	0·4	46	2½	282,313	1870
78,323	73,175	70,373	53,998	517,139	12,092,741	3·2	—	49	8½	290,249	1871
79,350	112,942	75,598	54,906	533,307	12,381,278	1·5	—	57	1	290,418	1872
80,429	100,557	81,175	52,408	§649,469	12,426,566	—	3·9	57	2	288,796	1873
80,558	79,111	83,648	55,682	§773,912	12,851,007	—	0·4	60	3	286,343	1874
83,173	81,579	85,047	60,178	§816,983	12,694,208	—	2·3	50	11	‖295,096	1875
92,678	82,088	85,205	85,820	§877,308	12,636,942	—	2·5	45	5	291,351	1876
93,244	88,402	87,374	96,265	§976,543	12,998,237	0·9	—	48	2	286,930	1877
92,744	92,275	89,868	66,654	§1,121,778	13,615,297	3·9	—	56	8	298,827	1878
94,160	87,754	91,623	59,421	§1,263,738	13,093,184	1·8	—	43	7	303,886	1879
92,881	86,879	96,315	56,050	§1,315,938	14,092,102	2·4	—	45	4½	308,486	1880
92,674	87,745	98,281	79,516	§1,419,735	14,390,262	1·1	—	43	7	310,456	1881
91,585	97,196	100,914	94,860	1,511,242	14,864,739	1·6	—	46	2	315,482	1882

§ Col. (13.)—In the years ended Lady-day 1873, 1874, 1875, 1876, 1877, 1878, 1879, 1880, 1881, and 1882 respectively, the following payments were made to the Rural Sanitary Authorities and are included in this column, namely, 23,540*l.*, 137,954*l.*, 131,251*l.*, 107,293*l.*, 113,728*l.*, 117,298*l.*, 119,252*l.*, 109,459*l.*, 127,794*l.*, and 126,657*l.*; also the Contributions by the Overseers to the School Boards during the same years of the several sums of 62,791*l.*, 99,314*l.*, 160,706*l.*, 232,526*l.*, 339,590*l.*, 429,139*l.*, 514,281*l.*, 571,626*l.*, 619,141*l.*, and 667,296*l.*

‖ Col. (17.)—Inclusive of the disbursements for Medical Relief made by the Managers of Pauper District Schools, Sick Asylum Districts, and the Metropolitan Asylum District, not included in this column previous to 1875.

No. 45.

STATEMENT of the SIX PRINCIPAL ITEMS which constitute RELIEF to the POOR; 26 Years ended with **Lady-day 1882.**

Parochial Year.	AMOUNT EXPENDED IN RELIEF OF THE POOR.						
	In-maintenance.	Out-relief.	Maintenance of Lunatic Paupers.	Workhouse Loans paid with Interest.	Salaries and Rations of Officers.	Other.	Total.
	£	£	£	£	£	£	£
1857	1,088,558	3,152,278	377,659	217,196	637,629	425,437	5,898,757
1858	1,067,803	3,117,274	397,826	202,605	638,441	454,593	5,878,542
1859	954,509	2,923,199	413,357	194,579	638,206	434,839	5,558,689
1860	912,360	2,862,753	419,565	182,224	644,799	433,263	5,454,964
1861	1,033,689	3,012,251	443,892	188,441	660,370	440,300	5,778,943
1862	1,133,286	3,155,820	482,425	183,477	668,447	454,466	6,077,921
1863	1,127,142	3,574,136	501,368	176,165	679,480	468,745	6,527,036
1864	1,095,814	3,466,392	524,166	177,247	696,098	463,664	6,423,381
1865	1,111,478	3,258,813	535,115	175,242	706,529	477,789	6,264,966
1866	1,188,784	3,196,685	566,482	180,746	730,704*	576,116	6,439,517
1867	1,375,627	3,358,351	607,292	186,317	747,650	684,603	6,959,840
1868	1,517,496	3,620,284	656,792	207,998	770,539	724,951	7,498,060
1869	1,546,580	3,677,379	710,941	204,601	805,136	717,967	7,673,100†
1870	1,502,807	3,633,051	722,613	252,215	818,183	723,972	7,644,307
1871	1,524,695	3,663,970	746,113	291,284	838,268	810,013	7,886,724
1872	1,5[illegible]5,790	3,583,571	742,483	278,566	871,402	945,867	8,007,403
1873	1,549,403	3,279,122	780,927	272,698	893,218	914,957	7,692,169
1874	1,649,333	3,110,896	830,454	271,808	909,231	891,815	7,664,957
1875	1,577,596	2,958,670	859,073	267,337	929,723	896,196	7,488,481
1876	1,534,224	2,760,804	883,267	275,067	942,581	940,878	7,335,858
1877	1,613,757	2,616,465	911,426	285,086	972,217	1,001,746	7,400,034
1878	1,727,340	2,621,786	957,119	287,934	997,308	1,119,638	7,688,650
1879	1,720,947	2,641,558	986,050	296,533	1,023,197	1,153,308	7,829,819
1880	1,757,749	2,710,778	994,204	319,426	1,053,218	1,181,511	8,015,010
1881	1,838,641	2,660,022	1,033,780	338,419	1,069,188	1,135,286	8,102,136
1882	1,831,595	2,626,375	1,059,460	351,203	1,087,641	1,296,523	8,232,472

* Superannuations are included in this column in 1866 and thenceforth.

† Total Expenditure in this column from 1869 and thenceforth is not the precise sum of the six preceding amounts, the difference arises from the inequality of the distribution in the Metropolis of the Common Poor Fund. *See ante*, p. 151, for explanation of this.

No. 46.

POOR RATES and the EXPENDITURE FOR RELIEF in ENGLAND; RATE per Head, and RATE in the Pound, of both Items; and the AVERAGE PRICE OF WHEAT; for the Years ended at **Lady-day 1842 to 1882** inclusive.

Years ended at Lady-day.	Population estimated according to the Ratios of Increase.	Amount of Money levied for Poor Rates.	Total expended in Relief and Maintenance of the Poor.	Rate per Head of Poor Rates levied, and the Rate per Head of Relief on the Estimated Population.		Rate in the Pound for Levy, and for Relief to the Poor, on the Rateable Value.		Average Price of Wheat per Imperial Quarter.	Years ended at Lady day.
				Levy.	Relief to the Poor.	Levy.	Relief to the Poor.		
	(1.)	(2.)	(3.)	(4.)	(5.)	(6.)	(7.)	(8.)	
		£	£	s. d.	s. d.	s. d.	s. d.	s. d.	
1842	15,981,000	6,552,890	4,911,498	8 2½	6 1¾	—	—	64 0	1842
1843	16,194,000	7,085,595	5,208,027	8 9	6 5¼	—	—	54 4	1843
1844	16,410,000	6,847,205	4,976,093	8 4¼	6 0¾	—	—	51 5	1844
1845	16,629,000	6,791,006	5,039,703	8 2	6 0¾	—	—	49 2	1845
1846	16,851,000	6,800,623	4,954,204	8 0¾	5 10½	—	—	53 3	1846
1847	17,076,000	6,964,825	5,298,787	8 2	6 2½	2 0·8	1 6·9	59 0	1847
1848	17,304,000	7,817,430	6,180,764	9 0½	7 1¾	—	—	64 6	1848
1849	17,534,000	7,674,146	5,792,963	8 9	6 7¼	—	—	49 1	1849
1850	17,765,000	7,270,493	5,395,022	8 2¼	6 1	2 1·8	1 7·1	42 7	1850
1851	17,927,609	6,778,914	4,962,704	7 6¾	5 6½	—	—	39 11	1851
1852	18,205,000	6,552,298	4,897,685	7 2½	5 4½	—	—	39 4	1852
1853	18,402,000	6,522,412	4,939,064	7 1	5 4½	—	—	42 0	1853
1854	18,617,000	6,973,220	5,282,853	7 6	5 8	—	—	61 7	1854
1855	18,840,000	7,864,149	5,890,041	8 4¼	6 3	—	—	70 0	1855
1856	19,043,000	8,201,348	6,004,244	8 7¼	6 3¾	2 3·4	1 8·1	75 4	1856
1857	19,207,000	8,139,003	5,898,756	8 5¼	6 1¾	—	—	65 3	1857
1858	19,361,000	8,188,880	5,878,542	8 5½	6 0¾	—	—	53 10	1858
1859	19,578,000	8,108,222	5,558,689	8 3½	5 8¼	—	—	42 9	1859
1860	19,837,000	7,715,948	5,454,964	7 9¼	5 6	—	—	44 9	1860
1861	20,066,224	7,921,619	5,778,943	7 10¾	5 9	—	—	55 10	1861
1862	20,228,000	8,511,161	6,077,525	8 5	6 0	—	—	56 7	1862
1863	20,445,000	9,174,976	6,527,036	8 4	6 4½	—	—	52 1	1863
1864	20,663,000	9,448,319	6,423,381	9 1¾	6 2½	—	—	43 2	1864
1865	20,881,000	9,392,191	6,264,966	9 0	6 0	—	—	39 8	1865
1866	21,100,000	9,573,772	6,439,517	9 1	6 1¼	2 0·5	1 4·5	43 6	1866
1867	21,320,000	10,303,665	6,959,840	9 8	6 6¼	—	—	53 7½	1867
1868	21,540,000	11,054,513	7,498,059	10 3¼	6 11½	2 2·4	1 5·9	67 6½	1868
1869	21,760,000	11,363,656	7,673,100	10 5¼	7 0¾	—	—	58 3	1869
1870	21,980,000	11,573,608	7,644,307	10 6¼	6 11½	2 2·6	1 5·6	46 2½	1870
1871	22,712,266	11,610,920	7,886,724	10 2¾	6 11¼	2 1·9	1 5·6	49 8½	1871
1872	23,000,000	12,100,490	8,007,403	10 6¼	6 11½	2 2·5	1 5·6	57 1	1872
1873	23,300,000	12,190,600	7,692,169	10 5½	6 7¼	2 2·0	1 4·4	57 2	1873
1874	23,580,000	12,342,251	7,664,957	10 5½	6 6	2 1·6	1 4·4	60 3	1874
1875	23,860,000	12,483,133	7,488,481	10 5½	6 3¼	2 1·9	1 3·5	50 11	1875
1876	24,160,000	12,092,087	7,335,858	10 0	6 0¾	2 0·4	1 2·8	45 5	1876
1877	24,460,000	12,049,046	7,400,034	9 10¼	6 0½	1 11·2	1 2·3	48 2	1877
1878	24,760,000	12,585,677	7,688,650	10 2	6 2½	1 11·6	1 2·4	56 8	1878
1879	25,010,000	12,913,797	7,829,819	10 4	6 3¼	1 11·7	1 2·3	43 7	1879
1880	25,323,000	13,033,655	8,015,010	10 3½	6 4	1 11·4	1 2·4	45 4½	1880
1881	25,968,286	13,302,088	8,102,136	10 3	6 3	1 11·5	1 2·3	43 7	1881
1882	26,055,406	13,947,681	8,232,472	10 8	6 3¾	2 0·0	1 2·1	46 2	1882

Note.—The Population of 1851, 1861, 1871, and 1881 is the actual Population according to the Census taken in those years.

No. 47.

IN-MAINTENANCE AND OUT-DOOR RELIEF.—REMARKS, Half Year ended Lady-day 1882.

Number of Unions returned.

The Returns of In-maintenance and Out-door Relief have been received from all the Unions, namely 647. The amount expended in these Unions during the half year was, for—

In-maintenance.		Out-door Relief.		Total.
£963,882	-	£1,287,156	-	£2,251,038

The population of the places referred to was 25,965,971, according to the Census of 1881 (Preliminary Report); the entire population of England being 25,968,286.*

Expenditure Lady-day, half years 1880, 1881, and 1882.

The following Table is a comparative statement of the expenditure for the half years ended at Lady-day 1880, 1881, and 1882 :—

Half Years ended at Lady-day	Cost of In-Maintenance.	Cost of Out-door Relief.	Cost of Total.	Difference as compared with 1880. Incr.	Difference as compared with 1880. Decr.	Difference per Cent. Incr.	Difference per Cent. Decr.
	£	£	£	£	£		
1880 -	932,553	1,361,650	2,294,203	—	—	—	—
1881 -	946,599	1,307,958	2,254,557	47,423	—	2·1	—
1882 -	963,882	1,287,156	2,251,038	—	43,165	—	1·9

Prices of Wheat.

The average price of wheat, during the three half years ended Lady-day was, in—

1880 - - - - 46*s.* 7*d.* per imperial quarter.
1881 - - - - 42*s.* 7*d.* ,, ,,
1882 - - - - 45*s.* 8*d.* ,, ,,

Of other Provisions.

The average contract prices of certain articles of food, supplied to the Guardians of the Poor of Lambeth, Birmingham, and Thingoe during the same periods, are exhibited in the next Tables :—

Half Years ended at Lady-day	Bread, per 4lb. Loaf. Lambeth.	Bread, per 4lb. Loaf. Birmingham.	Bread, per 4lb. Loaf. Thingoe.	Flour, per Sack of 280 lbs. Lambeth.	Flour, per Sack of 280 lbs. Birmingham.	Flour, per Sack of 280 lbs. Thingoe.	Potatoes, per Ton. Lambeth.	Potatoes, per Ton. Birmingham.	Potatoes, per Ton. Thingoe.	Mutton and Beef, per Stone of 14 lbs. Lambeth.	Mutton and Beef, per Stone of 14 lbs. Birmingham.	Mutton and Beef, per Stone of 14 lbs. Thingoe.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1880	0 5	0 6½	0 5½	32 0	36 6	40 0	140 0	105 0	140 0	8 7½	7 10½	8 4
1881	0 4½	0 6½	0 5½	32 1	33 8	35 0	100 0	73 7	100 0	7 10½	7 4	9 4
1882	0 4½	0 6½	0 6½	38 1	40 0	40 10	90 0	47 6	—	8 7½	7 0	8 11

(*continued*)

* The difference arises from the exclusion of the Scilly Islands, the Inns of Court, and a few other small places, which make no Return.

Half Years ended at Lady-day	Butter, per lb.			Cheese, per lb.			Tea, per lb.			Sugar, per lb.		
	Lambeth.	Birmingham.	Thingoe.	Lambeth.	Birmingham.	Thingoe.	Lambeth.	Birmingham.	Thingoe.	Lambeth.	Birmingham.	Thingoe
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1880	0 7	0 10½	1 0	0 4	0 6½	0 6	1 5¼	1 6½	2 0	0 2	0 2½	0 3
1881	0 9½	0 11¾	1 1	0 5¼	0 6¾	0 7½	1 6	1 6¾	2 0	0 2½	0 2½	0 2½
1882	0 9¾	0 9¾	1 1	0 6	0 6	0 6½	1 5	1 4¾	2 0	0 2½	0 2½	0 3

Comparing the expenditure for In-maintenance and Out-door Relief of the Lady-day half year, 1882, with that of 1881, there was a decrease of 3,519*l.*, or 0·2 per cent. Comparative Expenditure in Divisions.

Divisions.	Number of Unions.	Expended for In-maintenance and Out-door Relief, during the Half Years ended Lady-day		Difference between the Lady-day Half Years 1882 and 1881.		Difference per Cent.	
		1881.	1882.				
		£	£	Incr. £	Decr. £	Incr.	Decr.
I. THE METROPOLIS -	30	391,384	411,967	20,583	—	5·3	—
II. SOUTH EASTERN -	98	229,036	237,326	8,290	—	3·6	—
III. SOUTH MIDLAND -	64	171,100	169,043	—	2,057	—	1·2
IV. EASTERN - -	55	140,898	143,236	2,338	—	1·7	—
V. SOUTH WESTERN -	79	216,452	215,777	—	675	—	0·3
VI. WEST MIDLAND -	82	247,257	243,251	—	4,006	—	1·6
VII. NORTH MIDLAND -	44	132,038	130,644	—	1,394	—	1·1
VIII. NORTH WESTERN -	42	244,645	232,709	—	11,936	—	4·9
IX. YORK - - -	62	194,353	190,833	—	3,520	—	1·8
X. NORTHERN - -	39	103,076	96,506	—	6,570	—	6·4
XI. WELSH - - -	52	184,318	179,746	—	4,572	—	2·5
ENGLAND - -	647	2,254,557	2,251,038	—	3,519	—	0·2

The sums disbursed by the Guardians as "Further Relief in shape of School Fees" for the education of the Out-door Pauper Children in Public Elementary Schools, as well as the amount expended for "Relief in Kind" to the Out-door Paupers, are also given in this Return. It appears that out of the 647 Unions of England, 158 during the past half year administered all their Relief to Out-door Paupers in money. Relief in Money and in Kind to Out-door Paupers.

DIVISIONS.	Number of Unions.	Expended during the Half Year ended with Lady-day 1882 for Out-door Relief.			
		In Money.	In Kind.	Further Relief in shape of School Fees.	TOTAL.
		£	£	£	£
I. THE METROPOLIS -	30	77,517	20,414	993	98,924
II. SOUTH EASTERN -	98	96,144	28,660	1,114	125,918
III. SOUTH MIDLAND -	64	94,364	18,923	657	113,944
IV. EASTERN - -	55	64,298	29,643	608	94,549
V. SOUTH WESTERN -	79	148,162	15,877	1,361	165,400
VI. WEST MIDLAND -	82	128,130	19,766	1,930	149,826
VII. NORTH MIDLAND -	44	85,576	4,813	715	91,104
VIII. NORTH WESTERN -	42	99,450	7,442	2,334	109,226
IX. YORK - - -	62	115,820	6,066	2,524	124,410
X. NORTHERN - -	39	63,559	768	1,687	66,014
XI. WELSH - - -	52	140,073	5,492	2,276	147,841
ENGLAND - -	647	1,113,093	157,864	16,199	1,287,156

FREDERICK PURDY,
Principal of the Statistical Department.

Local Government Board, Whitehall,
25 July 1882.

No. 48.—In-maintenance and Out-door Relief.—Comparative Statement, Half Years ended at **Lady-Day 1881 and 1882** respectively, in 647 Unions having a population of 25,965,971 Persons; the entire Population of England being 25,968,286 (Census 1881, Preliminary Report).

DIVISIONS and UNION-COUNTIES.	Unions.	Number of Parishes.	Population, 1881 (Preliminary Census).	COST OF IN-MAINTENANCE AND OUT-DOOR RELIEF. Half Years ended at Lady-day 1881. In-maintenance.	Out-door Relief.	Total.	1882. In-maintenance.	Out-door Relief.	Total.	Difference between the Lady-day Half Years 1881 & 1882. Incr.	Decr.	Difference per Cent. Incr.	Decr.
I. THE METROPOLIS.				£	£	£	£	£	£	£	£		
1.*Middlesex (part) -	22	167	2,548,993	213,299	62,088	275,387	217,700	60,626	278,326	2,939	—	1·1	—
2.*Surrey (part) -	5	17	980,218	60,148	21,274	81,422	74,038	22,175	96,213	14,791	—	18·0	—
3.*Kent (part) - -	3	11	285,360	19,589	14,986	34,575	21,305	16,123	37,428	2,853	—	8·2	—
Totals -	30	195	3,814,571	293,036	98,348	391,384	313,043	98,924	411,967	20,583	—	5·3	—
II. SOUTH EASTERN.													
2.*Surrey (part) -	11	138	460,799	20,428	19,870	40,298	22,962	20,315	43,277	2,979	—	7·4	—
3.*Kent (part) - -	26	425	707,936	31,886	28,902	60,788	32,763	29,822	62,585	1,797	—	3·0	—
4. Sussex - - -	23	326	494,027	21,944	30,579	52,523	22,101	32,011	54,112	1,589	—	3·0	—
5. Southampton -	26	355	575,451	21,990	32,692	54,682	23,899	32,785	56,684	2,002	—	3·7	—
6. Berks - - -	12	239	247,938	9,466	11,279	20,745	9,683	10,985	20,668	—	77	—	0·4
Totals -	98	1,483	2,486,151	105,714	123,322	229,036	111,408	125,918	237,326	8,290	—	3·6	—
III. SOUTH MIDLAND.													
1.*Middlesex (part) -	6	58	380,685	14,231	14,612	28,843	14,434	15,076	29,510	667	—	2·3	—
7. Hertford - -	12	165	202,315	8,089	16,347	24,436	8,291	16,818	25,109	673	—	2·8	—
8. Buckingham -	7	195	155,885	5,090	12,735	17,825	5,360	12,542	17,902	77	—	0·4	—
9. Oxford - - -	9	299	181,564	6,546	14,339	20,885	6,236	13,641	19,877	—	1,008	—	4·8
10. Northampton -	12	332	277,002	7,692	23,476	31,168	7,257	22,825	30,082	—	1,086	—	3·5
11. Huntingdon -	3	88	53,218	1,964	2,985	4,949	1,999	3,018	5,017	68	—	1·4	—
12. Bedford - -	6	138	154,249	5,168	12,234	17,402	4,845	11,636	16,481	—	921	—	5·3
13. Cambridge - -	9	176	191,123	7,301	18,291	25,592	6,677	18,388	25,065	—	527	—	2·1
Totals -	64	1,451	1,596,041	56,081	115,019	171,100	55,099	113,944	169,043	—	2,057	—	1·2
IV. EASTERN.													
14. Essex - - -	16	373	551,765	21,273	33,717	54,990	22,259	32,751	55,010	20	—	—	—
15. Suffolk - - -	17	525	353,509	11,327	21,330	32,657	11,332	22,693	34,025	1,368	—	4·2	—
16. Norfolk - - -	22	744	437,649	15,225	38,026	53,251	15,096	39,105	54,201	950	—	2·0	—
Totals -	55	1,642	1,342,923	47,825	93,073	140,898	48,687	94,549	143,236	2,338	—	1·7	—
V. SOUTH WESTERN.													
17. Wilts - - -	17	322	248,644	9,312	21,114	30,426	9,208	20,787	29,995	—	431	—	1·4
18. Dorset - - -	12	288	184,936	4,641	17,524	22,165	4,777	18,223	23,000	835	—	3·8	—
19. Devon - - -	20	475	609,157	14,777	54,095	68,872	15,096	54,100	69,196	324	—	0·5	—
20. Cornwall - -	13	221	322,890	6,080	26,172	32,252	6,045	24,619	30,664	—	1,588	—	4·9
21. Somerset - -	17	496	490,504	15,506	47,231	62,737	15,251	47,671	62,922	185	—	0·3	—
Totals -	79	1,802	1,856,131	50,316	166,136	216,452	50,377	165,400	215,777	—	675	—	0·3
VI. WEST MIDLAND.													
22. Gloucester - -	17	363	525,123	21,050	37,701	58,751	20,031	36,595	56,626	—	2,125	—	3·6
23. Hereford - -	8	254	118,148	4,686	8,870	13,556	4,618	9,041	13,659	103	—	0·8	—
24. Salop - -	15	301	265,707	8,761	7,307	16,068	8,798	7,269	16,067	—	1	—	0·0

IN-MAINTENANCE and OUT-DOOR RELIEF, during the Half Years ended at **Lady-day 1881 and 1882** respectively, &c.—*continued.*

DIVISIONS and UNION-COUNTIES.	Unions.	Number of Parishes.	Population, 1881 (Preliminary Census).	COST OF IN-MAINTENANCE AND OUT-DOOR RELIEF. Half Years ended at Lady-day						Difference between the Lady-day Half Years 1881 & 1882.		Difference per Cent.	
				1881.			1882.						
				In-maintenance.	Out-door Relief.	Total.	In-maintenance.	Out-door Relief.	Total.				
VI. WEST MIDLAND —*continued.*				£	£	£	£	£	£	Incr. £	Decr. £	Incr.	Decr.
25. Stafford	17	280	1,006,741	27,363	53,888	81,251	26,289	54,088	80,377	—	874	—	1·1
26. Worcester	11	233	383,188	10,719	15,962	26,681	10,835	16,385	27,220	539	—	2·0	—
27. Warwick	14	272	730,455	25,207	25,743	50,950	22,854	26,448	49,302	—	1,648	—	3·2
Totals	82	1,703	3,029,362	97,786	149,471	247,257	93,425	149,826	243,251	—	4,006	—	1·6
VII. NORTH MIDLAND.													
28. Leicester	11	351	326,006	9,626	15,114	24,740	9,280	15,438	24,718	—	22	—	0·1
29. Rutland	2	67	23,007	907	1,713	2,620	899	1,809	2,708	88	—	3·4	—
30. Lincoln	14	759	463,367	12,232	39,277	51,509	12,170	38,103	50,273	—	1,236	—	2·4
31. Nottingham	8	307	438,712	9,529	17,297	26,826	9,278	16,827	26,105	—	721	—	2·7
32. Derby	9	278	386,532	7,544	18,799	26,343	7,913	18,927	26,840	497	—	1·9	—
Totals	44	1,762	1,637,624	39,838	92,200	132,038	39,540	91,104	130,644	—	1,394	—	1·1
VIII. NW. WESTERN.													
33. Chester	12	472	621,544	13,922	25,072	38,994	14,715	24,224	38,939	—	55	—	0·1
34. Lancaster	30	480	3,485,611	113,740	91,911	205,651	108,768	85,002	193,770	—	11,881	—	5·8
Totals	42	952	4,107,155	127,662	116,983	244,645	123,483	109,226	232,709	—	11,936	—	4·9
IX. YORK.													
35. West Riding	35	709	2,197,811	45,901	93,828	139,729	47,070	89,214	136,284	—	3,445	—	2·5
36. East Riding	10	375	362,390	11,237	17,563	28,800	11,348	17,353	28,701	—	99	—	0·3
37. North Riding	17	506	334,326	7,716	18,108	25,824	8,005	17,843	25,848	24	—	0·1	—
Totals	62	1,590	2,894,527	64,854	129,499	194,353	66,423	124,410	190,833	—	3,520	—	1·8
X. NORTHERN.													
38. Durham	15	301	875,507	16,645	35,594	52,239	15,838	33,485	49,323	—	2,916	—	5·6
39. Northumberland	12	541	434,024	9,065	20,785	29,850	7,891	19,148	27,039	—	2,811	—	9·4
40. Cumberland	9	209	250,630	5,121	11,255	16,376	5,188	10,737	15,925	—	451	—	2·7
41. Westmorland	3	110	64,307	1,692	2,919	4,611	1,575	2,644	4,219	—	392	—	8·5
Totals	39	1,161	1,624,468	32,523	70,553	103,076	30,492	66,014	96,506	—	6,570	—	6·4
XI. WELSH.													
42. Monmouth	6	164	234,440	6,524	19,393	25,917	6,431	18,034	24,465	—	1,452	—	5·6
43. South Wales	27	647	881,263	15,287	81,151	96,438	15,765	77,953	93,718	—	2,710	—	2·8
44. North Wales	19	374	461,315	9,153	52,810	61,963	9,709	51,854	61,563	—	400	—	0·6
Totals	52	1,185	1,577,018	30,964	153,354	184,318	31,905	147,841	179,746	—	4,572	—	2·5
TOTALS of Unions in England	647	14,926	25,965,971	946,599	1,307,958	2,254,557	963,882	1,287,156	2,251,038	—	3,519	—	0·2
Residue of the Kingdom	- -	5	2,315	—	—	—	—	—	—	—	—	—	—
TOTALS of England	- -	14,931	25,968,286	—	—	—	—	—	—	—	—	—	—

No. 49.

REMARKS ON THE RETURNS OF IN AND OUT-DOOR RELIEF.—Half Year ended MICHAELMAS 1882.

Number of Unions returned.

THE Returns of In-maintenance and Out-door Relief have been received from 647 Unions. The amount expended in these Unions during the half year ended Michaelmas 1882 was, for—

In-maintenance.	Out-door Relief.	Total.
£896,593 -	£1,307,697 -	£2,204,290

The population of the places referred to was 25,965,971, according to the Census of 1881 (Preliminary Report); the entire population of England being 25,968,286.*

Expenditure Michaelmas half years 1880, 1881, and 1882.

The following Table is a comparative statement of the Expenditure for the half years ended at Michaelmas 1880, 1881, and 1882.

Half Years ended at Michaelmas	Cost of In-Maintenance.	Cost of Out-door Relief.	Cost of Total.	Decrease as compared with 1880.	Decrease per Cent.
	£	£	£	£	£
1880 -	893,167	1,348,443	2,241,610	—	—
1881 -	886,071	1,330,831	2,216,902	24,708	1·1
1882 -	896,593	1,307,697	2,204,290	37,320	1·7

Prices of Wheat.

The average price of wheat, during the same half years, was, in—

1880 - - - - 44*s.* 6½*d.* per imperial quarter
1881 - - - - 46*s.* 8*d.* „ „
1882 - - - - 47*s.* 0*d.* „ „

Of other Provisions.

The average contract prices of certain articles of food, supplied to the Guardians of the Poor of Lambeth, Birmingham, and Thingoe during the same periods, are exhibited in the next Tables :—

Half Years ended at Michaelmas	Bread, per 4 lb. Loaf. Lambeth.	Birmingham.	Thingoe.	Flour, per Sack of 280 lbs. Lambeth.	Birmingham.	Thingoe.	Potatoes, per Ton. Lambeth.	Birmingham.	Thingoe.	Mutton and Beef, per Stone of 14 lbs. Lambeth.	Birmingham.	Thingoe.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1880	0 5	0 6½	0 6	35 0	36 10½	40 0	140 0	98 3	120 0	9 0¾	8 7	9 0
1881	0 4¾	0 6½	0 5¾	40 0	26 4½	35 0	100 0	66 6	No Contract.	8 10¾	7 10½	8 11
1882	0 5	0 6½	0 6	30 0	36 3	40 0	85 0	100 0	No Contract.	9 3¾	8 9	9 2

(*continued*)

* The difference arises from the exclusion of the Scilly Islands, which make no return.

Half Years ended at Michaelmas	Butter, per lb.			Cheese, per lb.			Tea, per lb.			Sugar, per lb.		
	Lambeth.	Birmingham.	Thingoe.	Lambeth.	Birmingham.	Thingoe.	Lambeth.	Birmingham.	Thingoe.	Lambeth.	Birmingham.	Thingoe.
	s. d.	*s. d*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
1880	0 8	0 10½	1 0½	0 6½	0 5½	0 7½	1 6	1 6½	2 0	0 2¾	0 2½	0 2¾
1881	0 8½	0 11	1 1	0 6	0 6	0 7	1 5	1 5½	2 0	0 2	0 2¾	0 3
1882	0 8½	0 9¼	1 1½	0 6	0 5½	0 6½	1 6	1 4¾	1 5	0 2	0 4¾	0 3

Comparative Expenditure in Divisions.

Comparing the expenditure for In-maintenance and Out-door Relief of the Michaelmas half-year 1882 with that of 1881, there was a decrease of 12,612*l.*, or 0·6 per cent.

DIVISIONS.	Number of Unions.	Expended for In-maintenance and Out-door Relief, during the Half Years ended Michaelmas		Difference between the Michaelmas Half Years 1882 and 1881.		Difference per Cent.	
		1881.	1882.				
		£	£	Incr. £	Decr. £	Incr.	Decr.
I. THE METROPOLIS -	30	385,573	398,033	3,460	—	0·9	—
II. SOUTH EASTERN -	98	223,415	227,517	4,102	—	1·8	—
III. SOUTH MIDLAND -	64	166,907	165,678	—	1,229	—	0·7
IV. EASTERN - -	55	137,535	138,232	697	—	0·5	—
V. SOUTH WESTERN -	79	219,852	216,454	—	3,398	—	1·5
VI. WEST MIDLAND -	82	243,842	240,714	—	3,128	—	1·3
VII. NORTH MIDLAND -	44	133,775	130,505	—	3,270	—	2·4
VIII. NORTH WESTERN -	42	229,264	229,001	—	263	—	0·1
IX. YORK - - -	62	192,664	188,858	—	3,806	—	2·0
X. NORTHERN - -	39	97,076	95,208	—	1,868	—	1·9
XI. WELSH - -	52	186,999	183,090	—	3,909	—	2·1
ENGLAND - -	647	2,216,902	2,204,290	—	12,612	—	0·6

Relief in Money and in Kind to Out-door Paupers.

The sums disbursed by the Guardians as "Further Relief in shape of School Fees" for the education of the Out-door Pauper Children in public elementary schools, as well as the amount expended for "Relief in Kind" to the Out-door Paupers, are also given in this Return. It appears that out of the 647 Unions of England, 165 during the past half-year administered all their relief to Out-door Paupers in money.

DIVISIONS.	Number of Unions.	Expended during the Half Year ended with Michaelmas 1882 for Out-door Relief.			
		In Money.	In Kind.	Further Relief in shape of School Fees.	TOTAL.
		£	£	£	£
I. THE METROPOLIS -	30	79,062	18,698	1,077	98,837
II. SOUTH EASTERN -	98	100,003	26,529	1,186	127,718
III. SOUTH MIDLAND -	64	97,151	17,976	670	115,797
IV. EASTERN - -	55	63,860	29,406	639	93,905
V. SOUTH WESTERN -	79	152,342	14,904	1,285	168,531
VI. WEST MIDLAND -	82	131,013	18,700	2,078	151,791
VII. NORTH MIDLAND -	44	88,982	4,264	729	93,975
VIII. NORTH WESTERN -	42	102,063	7,147	2,755	111,965
IX. YORK - -	62	118,490	6,209	2,461	127,160
X. NORTHERN -	39	64,081	714	1,623	66,418
XI. WELSH - -	52	144,063	5,117	2,420	151,600
ENGLAND - -	647	1,141,110	149,664	16,923	1,307,697

FREDERICK PURDY,
Principal of the Statistical Department.

Local Government Board, Whitehall,
29th January 1883.

No. 50.—In-maintenance and Out-door Relief.—Comparative Statement, Half Years ended at **Michaelmas 1881 and 1882** respectively, in 647 Unions, having a Population of 25,965,971 Persons; the entire Population of England being 25,968,286 (Census 1881, Preliminary Report).

DIVISIONS and UNION-COUNTIES.	Unions.	Number of Parishes.	Population, 1881 (Preliminary Census).	COST OF IN-MAINTENANCE AND OUT-DOOR RELIEF. Half Years ended at Michaelmas 1881. In-maintenance.	1881. Out-door Relief.	1881. Total.	1882. In-maintenance.	1882. Out-door Relief.	1882. Total.	Difference between the Michaelmas Half Years 1881 & 1882. Incr.	Decr.	Difference per Cent. Incr.	Decr.
				£	£	£	£	£	£	£	£		
I. THE METROPOLIS.													
1.*Middlesex (part) -	22	167	2,548,993	204,816	62,169	266,985	205,506	60,829	266,335	—	650	—	0·2
2.*Surrey (part) -	5	17	980,218	60,956	22,346	83,302	64,222	22,978	87,200	3,898	—	4·7	—
3.*Kent (part) - -	3	11	285,360	21,129	14,157	35,286	20,468	15,030	35,498	212	—	0·6	—
Totals -	30	195	3,814,571	286,901	98,672	385,573	290,196	98,837	389,033	3,460	—	0·9	—
II. SOUTH EASTERN.													
2.*Surrey (part) -	11	138	460,799	19,585	20,340	39,925	20,766	21,235	42,001	2,076	—	5·2	—
3.*Kent (part) - -	26	425	707,936	27,376	29,624	57,000	29,062	29,627	58,689	1,689	—	3·0	—
4. Sussex - - -	23	326	494,027	20,939	31,371	52,310	19,303	31,793	51,096	—	1,214	—	2·3
5. Southampton -	26	355	575,451	21,164	33,709	54,873	22,134	34,108	56,242	1,369	—	2·5	—
6. Berks - - -	12	239	247,938	8,352	10,955	19,307	8,534	10,955	19,489	182	—	0·9	—
Totals -	98	1,483	2,486,151	97,416	125,999	223,415	99,799	127,718	227,517	4,102	—	1·8	—
III. SOUTH MIDLAND.													
1.*Middlesex (part) -	6	58	380,635	13,014	14,809	27,823	14,134	14,451	28,585	762	—	2·7	—
7. Hertford - -	12	165	202,315	7,204	16,830	24,034	7,386	17,472	24,858	824	—	3·4	—
8. Buckingham -	7	195	155,885	4,601	13,190	17,791	4,567	12,894	17,461	—	330	—	1·9
9. Oxford - - -	9	299	181,564	5,588	14,379	19,967	5,292	13,921	19,213	—	754	—	3·8
10. Northampton -	12	332	277,002	7,145	23,748	30,893	7,051	23,446	30,497	—	396	—	1·3
11. Huntingdon -	3	88	53,218	1,736	3,132	4,868	1,651	3,057	4,708	—	160	—	3·3
12. Bedford - -	6	138	154,249	4,221	12,147	16,368	3,943	11,528	15,471	—	897	—	5·5
13. Cambridge - -	9	176	191,123	6,153	19,010	25,163	5,857	19,028	24,885	—	278	—	1·1
Totals -	64	1,451	1,596,041	49,662	117,245	166,907	49,881	115,797	165,678	—	1,229	—	0·7
IV. EASTERN.													
14. Essex - - -	16	373	551,765	19,546	33,144	52,690	20,014	32,514	52,528	—	162	—	0·3
15. Suffolk - - -	17	525	353,509	10,148	22,094	32,242	10,500	22,665	33,165	923	—	2·9	—
16. Norfolk - - -	22	744	437,649	13,676	38,927	52,603	13,813	38,726	52,539	—	64	—	0·1
Totals -	55	1,642	1,342,923	43,370	94,165	137,535	44,327	93,905	138,232	697	—	0·5	—
V. SOUTH WESTERN.													
17. Wilts - - -	17	323	248,644	8,513	21,447	29,960	8,510	20,817	29,327	—	633	—	2·1
18. Dorset - - -	12	288	184,936	4,253	18,301	22,554	4,311	18,419	22,730	176	—	0·8	—
19. Devon - - -	20	475	609,157	14,760	56,567	71,327	14,992	55,702	70,694	—	633	—	0·9
20. Cornwall - -	13	221	322,890	5,858	26,303	32,161	5,984	24,983	30,967	—	1,194	—	3·7
21. Somerset - -	17	496	490,504	14,068	49,782	63,850	14,126	48,610	62,736	—	1,114	—	3·7
Totals -	79	1,803	1,856,131	47,452	172,400	219,852	47,923	168,531	216,454	—	3,398	—	1·5
VI. WEST MIDLAND.													
22. Gloucester - -	17	362	525,123	19,085	37,113	56,198	19,383	36,252	55,635	—	563	—	1·0
23. Hereford - -		254	118,148	4,263	9,424	13,687	4,058	9,107	13,165	—	522	—	3·8
24. Salop -	15	301	265,707	8,204	7,537	15,741	8,181	7,394	15,575	—	166	—	1·1

IN-MAINTENANCE AND OUT-DOOR RELIEF, during the Half Years ended at **Michaelmas 1881 and 1882** respectively, &c.—*continued.*

DIVISIONS and UNION-COUNTIES.	Unions.	Number of Parishes.	Population, 1881 (Preliminary Census).	COST OF IN-MAINTENANCE AND OUT-DOOR RELIEF. Half Years ended at Michaelmas 1881. In-maintenance.	1881. Out-door Relief.	1881. Total.	1882. In-maintenance.	1882. Out-door Relief.	1882. Total.	Difference between the Michaelmas Half Years 1881 & 1882. Incr.	Decr.	Difference per Cent. Incr.	Decr.
VI. WEST MIDLAND —*continued.*				£	£	£	£	£	£	£	£		
25. Stafford	17	280	1,006,741	25,781	56,546	82,327	25,294	55,039	80,333	—	1,994	—	2·4
26. Worcester	11	233	383,188	10,158	17,004	27,162	9,906	17,274	27,180	18	—	0·1	—
27. Warwick	14	272	730,455	22,134	26,593	48,727	22,101	26,725	48,826	99	—	0·2	—
Totals	82	1,702	3,029,362	89,625	154,217	243,842	88,923	151,791	240,714	—	3,128	—	1·3
VII. NORTH MIDLAND.													
28. Leicester	11	351	326,006	9,122	15,791	24,913	8,224	16,279	24,503	—	410	—	1·6
29. Rutland	2	67	23,007	795	1,861	2,656	895	1,870	2,765	109	—	4·1	—
30. Lincoln	14	760	463,367	11,027	40,574	51,601	11,260	39,748	51,008	—	593	—	1·1
31. Nottingham	8	307	438,712	8,708	18,483	27,191	8,565	16,871	25,436	—	1,755	—	6·5
32. Derby	9	278	386,532	7,539	19,875	27,414	7,586	19,207	26,793	—	621	—	2·3
Totals	44	1,763	1,637,624	37,191	96,584	133,775	36,530	93,975	130,505	—	3,270	—	2·4
VIII. NH. WESTERN.													
33. Chester	12	472	621,544	13,909	25,669	39,578	13,848	25,300	39,148	—	430	—	1·1
34. Lancaster	30	480	3,485,611	100,692	88,994	189,686	103,188	86,665	189,853	167	—	0·1	—
Totals	42	952	4,107,155	114,601	114,663	229,264	117,036	111,965	229,001	—	263	—	0·1
IX. YORK.													
35. West Riding	35	709	2,197,811	43,970	95,658	139,628	44,063	90,971	135,034	—	4,594	—	3·3
36. East Riding	10	375	362,390	10,164	17,050	27,214	10,242	17,608	27,850	636	—	2·3	—
37. North Riding	17	506	334,326	6,991	18,831	25,822	7,393	18,581	25,974	152	—	0·6	—
Totals	62	1,590	2,894,527	61,125	131,539	192,664	61,698	127,160	188,858	—	3,806	—	2·0
X. NORTHERN.													
38. Durham	15	301	875,507	14,659	34,559	49,218	15,049	33,673	48,722	—	496	—	1·0
39. Northumberland	12	541	434,024	7,724	19,991	27,715	7,578	18,678	26,256	—	1,459	—	5·3
40. Cumberland	9	208	250,630	4,701	11,149	15,850	4,804	11,395	16,199	349	—	2·2	—
41. Westmorland	3	110	64,307	1,459	2,834	4,293	1,359	2,672	4,031	—	262	—	6·1
Totals	39	1,160	1,624,468	28,543	68,533	97,076	28,790	66,418	95,208	—	1,868	—	1·9
XI. WELSH.													
42. Monmouth	6	164	234,440	6,116	19,662	25,778	6,683	18,648	25,331	—	447	—	1·7
43. South Wales	27	648	881,263	14,832	83,066	97,898	15,244	79,404	94,648	—	3,250	—	3·3
44. North Wales	19	374	461,315	9,237	54,086	63,323	9,563	53,548	63,111	—	212	—	0·3
Totals	52	1,186	1,577,018	30,185	156,814	186,999	31,490	151,600	183,090	—	3,909	—	2·1
TOTALS of Unions in England	647	14,927*	25,965,971	886,071	1,330,831	2,216,902	896,593	1,307,697	2,204,290	—	12,612	—	0·6
Residue of the Kingdom	-	5	2,315	—	—	—	—	—	—	—		—	
TOTALS of England	-	14,932	25,968,286	—	—	—	—	—	—	—		—	

* Number of Parishes corrected up to 1st July 1882.

Appendix D.

Number of Paupers Relieved. Expenditure in Metropolitan Workhouses, Infirmaries, Asylums, and Hospitals.

Page

No. 51. Return of Pauperism.—Remarks, 1st January 1882 - 183

No. 52. Return of Paupers.—Summary, 1st January 1882 - 186

No. 53. Paupers of all Classes.—Comparative Statement, 1st January 1881 and 1882 - - - - - - - - 190

No. 54. Adult Able-bodied Paupers.—Comparative Statement, 1st January 1881 and 1882 - - - - - - - 192

No. 55. Pauperism.—Remarks on Return of number of Paupers on 1st July 1882 - - - - - - - - - 194

No. 56. Return of Paupers.—Summary of In-door and Out-door on 1st July 1882 - - - - - - - - - 196

No. 57. Paupers of all Classes.—Comparative Statement, 1st July 1881 and 1882 - - - - - - - - - 200

No. 58. Adult Able-bodied Paupers.—Comparative Statement, 1st July 1881 and 1882 - - - - - - - - 202

No. 59. Census of Paupers.—Serial Statement from 1861 to 1882 - 204

No. 60. Mean Number of Paupers of all Classes and of the Adult Able-bodied in England for 34 Years, 1849–82 - 206

No. 61. Metropolitan Pauperism.—Comparative Statement of the Number on the last Day of each Quarter, 1881 and 1882 - 208

No. 62. Metropolitan District.—Area, Population, Pauperism, and Rateable Value, Year 1882 - - - - - - - 210

No. 63. Summary of Returns of Out-door Relief Arrangements (Metropolis), Year ended 25th December 1881 - 212

No. 64. Summary of Out-door Medical Relief Returns (Metropolis), Year ended 25th December 1882 - - 214

No. 65. Admissions into Metropolitan Casual Wards during Years 1877, 1880, and 1882. Identification of Habitual Vagrants and Number of Refusals of Admission during 1882 - - - - - - - 216

No. 66. Number of Admissions into Metropolitan Casual Wards during each Month of the Years 1877, 1880, and 1882 - - - - - - - - - 218

No. 67. Average Nightly Number of Admissions to each Metropolitan Casual Ward in each Month of the Years 1877, 1880, and 1882 - - - - 219

Page

No. 68. Prosecutions of Casual Paupers in the Metropolis under Detention as Habitual Vagrants, during the 10 Years 1873–82 - - - - - 222

No. 69. Return of Average Prices paid for various Articles used in the Metropolitan Workhouses during Year ended Lady-day 1882 - - - - - 223

No. 70. Return of Average Prices paid for various Articles used in the Metropolitan Infirmaries, Asylums, and Hospitals, during Year ended Lady-day 1882 - - 227

No. 71. Expenditure during Year ended Lady-day 1882 at the Metropolitan Workhouses - - - - - 231

No. 72. Expenditure during Year ended Lady-day 1882 in the Metropolitan Infirmaries, Asylums, and Hospitals 237

No. 51.

Pauperism.—Remarks on the Returns of Pauperism, 1st January 1882.

Pauperism, 1st January.

The present publication contains the Tabulated Returns of 647 Unions. The population of these places, by the Census of 1881 (Preliminary Report), was 25,965,971; and the total number of paupers on the 1st January 1882 was—

In-door.	Out-door.	Gross Total.	Deduct Persons relieved both In-door and Out-door, on the 1st January.	Net Total.
193,899	609,594	803,493	112	803,381

This gives the proportion of paupers as 1 in 32, or 3·1 per cent. on the population, according to the Census of 1881.

First Table.

The first Table shows the number of paupers as able-bodied, not able-bodied, and insane; distinguishing those relieved in the workhouse from those relieved out of doors; children relieved with "able-bodied" parents are classed as *able-bodied;* but children relieved without their parents, or relieved with parents who are "not able-bodied," are classed as *not able-bodied.*

Table I.

Paupers, 1st January 1882.	In-door.		Out-door.		Total.
	Able-bodied.	Not Able-bodied.	Able-bodied.	Not Able-bodied.	
Males (Adult) -	10,506	52,822	15,946	77,843	157,117
Females (Adult) -	14,956	35,221	64,872	191,774	306,823
Children under 16 -	18,521	39,653	175,320	35,673	269,167
Vagrants - -	5,466	—	301	—	5,767
Insane, viz.:					
Males - -	—	6,827	—	20,957*	27,784
Females -	—	9,036	—	26,481*	35,517
Children -	—	891	—	427*	1,318
Total -	49,449	144,450	256,439	353,155	803,493

* The majority of insane paupers here classed among the out-door are in asylums.

Second Table. Comparison of 1st January 1882 and 1881.

Comparing the numbers returned on the 1st January 1882 with those at the same date in 1881, the figures stand thus:—

TABLE II.

DATE.		Number of Unions.	In-door Paupers.	Out-door Paupers.*	TOTAL.
1st January	1881	647	195,286	614,055	809,341
	1882	647	193,899	609,482	803,381

* Exclusive of those who on the 1st January were in receipt of in-door as well as out-door Relief, and therefore already enumerated with the in-door paupers.

Third Table.

The number of paupers of all classes in receipt of relief on the 1st of January 1881 and 1882, with the decrease, is exhibited in the next Table.

TABLE III.

DATE.		Unions.	Number of Paupers in Receipt of Relief.	Difference.		Difference per Cent.	
				Incr.	Decr.	Incr.	Decr.
1st January	1881	647	809,341	—		—	
	1882	647	803,381	—	5,960	—	0·7

Fourth Table.

The number of adult able-bodied paupers on the 1st January 1881 and 1882 is shown by the next Table.

TABLE IV.

DATE.		Unions.	Number of *Adult Able-bodied* Paupers.	Difference.		Difference per Cent.	
				Incr.	Decr.	Incr.	Decr.
1st January	1881	647	111,169	—		—	
	1882	647	106,280	—	4,889	—	4·4

The population, according to the Census of 1881, is printed opposite to each union-county, p. 186, *et seq.*

Local Government Board,
11 April 1882.

FREDERICK PURDY,
Principal of the Statistical Department.

No. 52.

RETURN OF PAUPERS.—SUMMARY, 1st January 1882.

No. 52.—Return of Paupers.—Summary of In-door and Out-door, on the the entire Population of England being

DIVISIONS and UNION-COUNTIES.	Unions.	Number of Parishes.	Population, 1881 (Preliminary Census).	IN-DOOR.										
				Able-Bodied.			Not Able-Bodied.			Lunatics, Insane Persons, and Idiots.			Vagrants relieved in the Workhouse.	Total.
				Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.		
I. THE METROPOLIS.														
1.*Middlesex (part) -	22	167	2,548,993	1,865	2,167	2,546	9,495	10,115	7,088	1,556	2,085	302	749	37,968
2.*Surrey (part) - -	5	17	980,218	392	515	516	2,884	2,663	3,558	419	540	99	183	11,769
3.*Kent (part) - -	3	11	285,380	253	267	139	713	779	1,286	114	110	38	65	3,764
Totals - -	30	195	3,814,571	2,510	2,949	3,201	13,092	13,557	11,932	2,089	2,735	439	997	53,501
II. SOUTH EASTERN.														
2.*Surrey (part) -	11	138	460,790	140	150	206	1,356	740	978	58	90	4	190	3,912
3.*Kent (part) - -	26	425	707,936	493	601	817	1,864	889	1,028	112	166	10	334	6,314
4. Sussex - - -	23	326	494,027	311	324	430	1,296	656	793	118	159	18	248	4,353
5. Southampton -	26	355	575,451	335	427	456	1,298	702	1,003	150	210	15	82	4,678
6. Berks - - -	12	239	247,938	172	225	247	624	259	435	58	67	2	51	2,140
Totals - -	98	1,483	2,486,151	1,451	1,727	2,156	6,488	3,246	4,237	496	692	49	905	21,397
III. SOUTH MIDLAND.														
1.*Middlesex (part) -	6	58	380,685	230	167	161	740	409	550	37	36	2	95	2,427
7. Hertford - -	12	165	202,315	124	103	163	645	221	299	34	42	3	129	1,763
8. Buckingham - -	7	195	155,885	54	75	160	375	152	195	31	41	..	48	1,131
9. Oxford - - -	9	299	181,564	107	118	195	422	175	273	49	80	3	83	1,505
10. Northampton -	12	332	277,002	80	95	136	458	178	371	62	88	5	86	1,559
11. Huntingdon - -	3	88	53,218	22	42	72	153	70	113	6	10	..	27	515
12. Bedford - -	6	138	154,249	82	52	72	324	155	186	22	32	..	52	977
13. Cambridge - -	9	176	191,123	81	137	217	561	212	347	31	36	3	35	1,660
Totals - -	64	1,451	1,596,041	780	789	1,176	3,678	1,572	2,334	272	365	16	555	11,537
IV. EASTERN.														
14. Essex - - -	16	373	551,765	229	265	310	1,538	663	955	96	143	19	132	4,350
15. Suffolk - - -	17	525	353,509	266	283	387	635	245	566	75	81	6	35	2,579
16. Norfolk - - -	22	744	437,649	277	378	568	851	358	487	101	150	6	36	3,212
Totals - -	55	1,642	1,342,923	772	926	1,265	3,024	1,266	2,008	272	374	31	203	10,141
V. SOUTH WESTERN.														
17. Wilts - - -	17	322	248,644	115	185	328	589	267	440	78	98	5	33	2,138
18. Dorset - - -	12	288	184,936	48	115	135	363	155	262	29	45	..	47	1,199
19. Devon - - -	20	475	609,157	106	348	471	953	704	715	128	198	10	52	3,685
20. Cornwall - -	13	221	322,890	7	211	286	354	339	342	40	70	1	..	1,650
21. Somerset - -	17	496	490,504	153	300	403	1,038	561	767	146	185	6	101	3,660
Totals - -	79	1,802	1,856,131	429	1,159	1,623	3,297	2,026	2,526	421	596	22	233	12,332
VI. WEST MIDLAND.														
22. Gloucester - -	17	363	525,123	401	483	468	1,126	648	723	215	330	12	141	4,547
23. Hereford - -	8	254	118,148	63	118	160	283	97	219	32	19	3	46	1,040
24. Salop - - -	15	301	265,707	80	141	180	676	262	507	52	110	7	65	2,080

1st January 1882, in 647 Unions, having a Population of 25,965,971 Persons; 25,968,286 (Census 1881, Preliminary Report).

OUT-DOOR.										Deduct Persons Relieved both In-door and Out-door on the 1st January, &c.	Net Total of Persons Relieved.	DIVISIONS and UNION-COUNTIES.
ABLE-BODIED.			NOT ABLE-BODIED.			LUNATICS, INSANE PERSONS, AND IDIOTS.						
Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Vagrants relieved out of the Workhouse.	Total.				
												I. THE METROPOLIS.
1,180	3,611	9,842	2,090	8,982	845	2,257	3,490	12	..	32,309	..	70,277	1.*Middlesex (part).
349	1,518	4,108	885	3,585	290	794	1,067	8	..	12,604	..	24,373	2.*Surrey (part).
181	752	1,933	495	2,069	431	221	325	3	..	6,410	..	10,174	3.*Kent (part).
1,710	5,881	15,883	3,470	14,636	1,566	3,272	4,882	23	..	51,323	..	104,824	- - Totals.
												II. SOUTH EASTERN.
371	1,013	2,827	1,053	2,594	539	327	467	18	..	9,209	..	13,131	2.*Surrey (part).
260	1,501	4,327	1,739	4,624	676	597	864	23	4	14,615	..	20,929	3.*Kent (part).
550	1,512	4,059	1,905	4,245	677	397	549	9	1	13,904	..	18,257	4. Sussex.
441	1,739	4,314	2,164	5,362	916	556	667	13	..	16,182	5	20,855	5. Southampton.
379	676	1,714	838	1,575	227	283	358	8	11	6,069	..	8,299	6. Berks.
2,001	6,441	17,241	7,699	18,400	3,035	2,160	2,915	71	16	59,979	5	81,371	- - Totals.
												III. SOUTH MIDLAND.
331	1,012	2,421	729	2,016	259	236	398	3	..	7,405	..	9,832	1.*Middlesex (part).
255	823	1,870	1,223	2,688	406	198	253	8	..	7,724	..	9,487	7. Hertford.
135	493	1,252	906	1,925	246	150	254	2	..	5,363	1	6,493	8. Buckingham.
262	515	1,490	1,162	2,287	405	220	272	4	..	6,617	..	8,122	9. Oxford.
164	709	1,953	1,438	3,118	364	264	289	7	..	8,306	..	9,865	10. Northampton.
18	88	219	240	489	39	62	63	1	..	1,219	..	1,734	11. Huntingdon.
168	428	1,253	977	1,977	292	184	184	6	..	5,469	..	6,446	12. Bedford.
240	761	1,819	1,168	2,905	381	187	231	4	2	7,698	..	9,358	13. Cambridge.
1,573	4,829	12,277	7,843	17,405	2,392	1,501	1,944	35	2	49,801	1	61,337	- - Totals.
												IV. EASTERN.
575	1,651	4,654	1,982	4,429	678	463	621	5	16	15,074	13	19,411	14. Essex.
343	1,056	2,974	1,852	3,593	562	309	435	3	4	11,131	5	13,705	15. Suffolk.
473	1,520	3,808	2,677	6,416	938	390	648	4	..	16,874	..	20,086	16. Norfolk.
1,391	4,227	11,436	6,511	14,438	2,178	1,162	1,704	12	20	43,079	18	53,202	- - Totals.
												V. SOUTH WESTERN.
242	757	1,947	1,744	3,634	503	302	417	8	11	9,565	1	11,702	17. Wilts.
147	645	1,576	1,465	3,318	675	218	251	5	..	8,300	..	9,499	18. Dorset.
431	1,727	4,373	4,193	9,608	1,812	561	772	26	5	23,508	..	27,193	19. Devon.
165	1,192	2,770	1,655	4,703	904	243	356	1	..	11,989	13	13,626	20. Cornwall.
381	1,634	4,461	3,829	8,055	1,521	451	608	19	3	20,962	..	24,622	21. Somerset.
1,366	5,955	15,127	12,886	29,318	5,415	1,775	2,404	59	19	74,324	14	86,642	- - Totals.
												VI. WEST MIDLAND.
423	1,679	4,338	2,634	5,952	1,370	477	580	16	..	17,469	..	22,016	22. Gloucester.
79	293	915	758	1,463	313	175	210	3	..	4,209	..	5,249	23. Hereford.
90	405	1,087	607	1,396	302	261	332	5	..	4485	..	6,565	24 Salop.

RETURN OF PAUPERS.—SUMMARY of IN-DOOR and OUT-DOOR, on the **1st January 1882,**
England being

DIVISIONS and UNION-COUNTIES.	Unions.	Number of Parishes.	Population, 1881. (Preliminary Census.)	IN-DOOR.										
				ABLE-BODIED.			NOT ABLE-BODIED.			LUNATICS, INSANE PERSONS, AND IDIOTS.			Vagrants relieved in the Workhouse.	Total.
				Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.		
VI. WEST MIDLAND—*cont.*														
25. Stafford	17	280	1,006,741	419	559	688	1,654	771	1,298	222	283	28	214	6,136
26. Worcester	11	233	383,188	159	236	384	702	318	430	50	86	3	131	2,499
27. Warwick	14	272	730,455	177	351	423	1,682	1,035	966	204	242	16	137	5,233
Totals	82	1,703	3,029,362	1,299	1,888	2,303	6,123	3,131	4,143	775	1,070	69	734	21,535
VII. NORTH MIDLAND.														
28. Leicester	11	351	326,006	174	190	231	510	219	343	78	76	5	116	1,942
29. Rutland	2	67	23,007	8	13	33	68	17	7	4	1	..	12	163
30. Lincoln	14	759	463,367	119	212	327	898	291	532	56	110	6	42	2,593
31. Nottingham	8	307	438,712	125	167	141	563	243	314	97	106	10	124	1,890
32. Derby	9	278	386,532	144	151	201	471	175	304	66	84	4	61	1,661
Totals	44	1,762	1,637,624	570	733	933	2,510	945	1,500	301	377	25	355	8,249
VIII. NORTH WESTERN.														
33. Chester	12	472	621,544	282	389	353	781	361	756	110	155	11	65	3,263
34. Lancaster	30	480	3,485,611	922	1,709	2,143	6,452	5,494	4,206	1,144	1,385	151	454	24,060
Totals	42	952	4,107,155	1,204	2,098	2,496	7,233	5,855	4,962	1,254	1,540	162	519	27,323
IX. YORK.														
35. West Riding	35	709	2,197,811	951	996	1,084	2,459	1,111	1,596	419	549	34	436	9,635
36. East Riding	10	375	362,390	61	171	240	789	411	528	69	124	6	77	2,476
37. North Riding	17	506	334,326	43	129	194	479	226	319	39	47	2	90	1,568
Totals	62	1,590	2,894,527	1,055	1,296	1,518	3,727	1,748	2,443	527	720	42	603	13,679
X. NORTHERN.														
38. Durham	15	301	875,507	173	391	474	967	452	828	84	128	11	106	3,614
39. Northumberland	12	541	434,024	29	177	252	485	328	434	58	86	3	69	1,921
40. Cumberland	9	209	250,630	35	133	166	335	194	348	44	52	3	28	1,338
41. Westmorland	3	110	64,307	19	29	35	121	36	100	15	18	1	25	399
Totals	39	1,161	1,624,468	256	730	927	1,908	1,010	1,710	201	284	18	228	7,272
XI. WELSH.														
42. Monmouth	6	164	234,440	50	108	175	451	187	374	25	40	2	24	1,436
43. South Wales	27	647	881,263	81	308	392	846	460	1,063	104	119	11	29	3,413
44. North Wales	19	374	461,315	49	245	356	495	218	421	90	124	5	81	2,084
Totals	52	1,185	1,577,018	180	661	923	1,792	865	1,858	219	283	18	134	6,933
TOTALS of Unions in England	647	14,926*	25,965,971	10,506	14,956	18,521	52,822	35,221	39,653	6,827	9,036	891	5,466	193,899
Residue of the Kingdom	..	5	2,315	No Return.			..	..	..	..	..	..	..	..
TOTALS of England	..	14,931	25,968,286	..	..	..	..	..	..	..	..	..	..	..

* Number of Parishes corrected up to 1st January 1882.

in 647 Unions, having a Population of 25,965,971 Persons; the entire Population of 25,968,286—*continued.*

OUT-DOOR.													DIVISIONS and UNION-COUNTIES.
ABLE-BODIED.			NOT ABLE-BODIED.			LUNATICS, INSANE PERSONS, AND IDIOTS.							
Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Vagrants relieved out of the Workhouse.	Total.	Deduct Persons Relieved both In-door and Out-door on the 1st January, &c.	Net Total of Persons Relieved.	
													VI. WEST MIDLAND—*cont.*
1,041	3,830	10,498	3,903	7,643	2,110	743	740	18	11	30,527	9	36,654	25. Stafford.
267	857	2,527	1,446	3,115	660	338	404	12	..	9,626	..	12,125	26. Worcester.
333	1,471	4,424	1,657	3,899	1,216	789	1,025	23	..	14,837	..	20,070	27. Warwick.
2,233	8,525	23,789	11,005	23,468	5,971	2,783	3,291	77	11	81,153	9	102,679	- - Totals.
													VII. NORTH MIDLAND.
95	599	1,847	1,017	2,217	350	353	391	7	16	6,892	2	8,832	28. Leicester.
10	74	172	120	233	7	30	22	..	..	668	..	831	29. Rutland.
220	1,156	2,991	2,235	5,213	756	356	431	5	13	13,376	18	15,951	30. Lincoln.
154	731	2,165	1,239	2,521	555	360	430	8	..	8,163	..	10,053	31. Nottingham.
206	775	2,171	1,166	2,479	382	274	278	13	36	7,780	1	9,440	32. Derby.
685	3,335	9,346	5,777	12,663	2,050	1,373	1,552	33	65	36,879	21	45,107	- - Totals.
													VIII. NORTH WESTERN.
154	1,173	3,391	1,183	3,168	642	440	551	8	4	10,714	..	13,977	33. Chester.
1,675	7,066	20,248	3,935	11,452	2,317	2,073	2,254	34	51	51,105	17	75,143	34. Lancaster.
1,829	8,239	23,639	5,118	14,620	2,959	2,513	2,805	42	55	61,819	17	89,125	- - Totals.
													IX. YORK.
1,357	5,948	16,323	4,461	10,963	2,000	1,283	1,486	21	1	43,843	1	53,477	35. West Riding.
101	734	2,016	1,131	2,802	658	227	239	4	..	7,912	..	10,388	36. East Riding.
167	903	2,471	1,001	2,420	397	245	283	6	..	7,893	..	9,461	37. North Riding.
1,625	7,585	20,810	6,593	16,185	3,055	1,755	2,008	31	1	59,648	1	73,326	- - Totals.
													X. NORTHERN.
497	2,365	6,388	1,571	4,023	917	561	487	7	2	16,818	7	20,425	38. Durham.
107	1,031	2,833	843	2,725	431	374	365	5	..	8,714	..	10,635	39. Northumberland.
85	608	1,756	583	1,818	376	192	192	1	55	5,666	..	7,004	40. Cumberland.
7	96	289	179	357	89	56	60	..	20	1,153	..	1,552	41. Westmorland.
696	4,100	11,266	3,176	8,923	1,813	1,183	1,104	13	77	32,351	7	39,616	- - Totals.
													XI. WELSH.
117	737	2,096	1,227	2,742	791	274	349	7	16	8,356	..	9,792	42. Monmouth.
464	3,384	8,464	3,751	10,941	2,429	834	1,018	20	14	31,319	16	34,716	43. South Wales.
256	1,634	3,946	2,787	8,035	2,019	372	505	4	5	19,563	3	21,644	44. North Wales.
837	5,755	14,506	7,765	21,718	5,239	1,480	1,872	31	35	59,238	19	66,152	- - Totals.
15,946	64,872	175,320	77,843	191,774	35,673	20,957	26,481	427	301	609,594	112	803,381	Totals of Unions in England.
..	..	..	..	..	..	..	..	..	..	..	..	..	Residue of the Kingdom.
..	..	..	..	..	..	..	..	..	..	..	..	..	Totals of England.

No. 53.—Paupers of All Classes.—Comparative Statement, **1st January 1881 and 1882,** in 647 Unions, having a Population of 25,965,971 Persons; the entire Population of England being 25,968,286 (Census 1881, Preliminary Report.)

DIVISIONS and UNION-COUNTIES.	Unions.	NUMBER OF PAUPERS OF ALL CLASSES RELIEVED						Difference between 1st Jan. 1882 and 1881.		Difference per Cent.	
		ON 1st JANUARY 1881.			ON 1st JANUARY 1882.						
		In-door.	Out-door.	TOTAL.	In-door.	Out-door.	TOTAL.	Incr.	Decr.	Inc.	Dec.
I. THE METROPOLIS.											
1.*Middlesex (part)	22	37,690	32,931	70,621	37,968	32,309	70,277	—	344	—	0·5
2.*Surrey (part)	5	11,512	11,771	23,283	11,769	12,604	24,373	1,090	—	4·7	—
3.*Kent (part)	3	3,608	6,169	9,777	3,764	6,410	10,174	397	—	4·1	—
Totals	30	52,810	50,871	103,681	53,501	51,323	104,824	1,143	—	1·1	—
II. SOUTH EASTERN.											
2.*Surrey (part)	11	3,721	8,996	12,717	3,912	9,209	13,121	404	—	3·2	—
3.*Kent (part)	26	6,392	14,359	20,751	6,314	14,615	20,929	178	—	0·9	—
4. Sussex	23	4,209	13,732	17,941	4,353	13,904	18,257	316	—	1·8	—
5. Southampton	26	4,543	16,062	20,605	4,678	16,177	20,855	250	—	1·2	—
6. Berks	12	2,079	6,044	8,123	2,140	6,069	8,209	86	—	1·1	—
Totals	98	20,944	59,193	80,137	21,397	59,974	81,371	1,234	—	1·5	—
III. SOUTH MIDLAND.											
1.*Middlesex (part)	6	2,498	6,990	9,488	2,427	7,405	9,832	344	—	3·6	—
7. Hertford	12	1,704	7,470	9,174	1,763	7,724	9,487	313	—	3·4	—
8. Buckingham	7	1,064	5,372	6,436	1,131	5,362	6,493	57	—	0·9	—
9. Oxford	9	1,487	6,519	8,006	1,505	6,617	8,122	116	—	1·4	—
10. Northampton	12	1,651	8,466	10,117	1,559	8,306	9,865	—	252	—	2·5
11. Huntingdon	3	483	1,286	1,769	515	1,219	1,734	—	35	—	2·0
12. Bedford	6	1,082	5,659	6,741	977	5,469	6,446	—	295	—	4·4
13. Cambridge	9	1,770	7,550	9,320	1,660	7,698	9,358	38	—	0·4	—
Totals	64	11,739	49,312	61,051	11,537	49,800	61,337	286	—	0·5	—
IV. EASTERN.											
14. Essex	16	4,092	15,193	19,285	4,350	15,061	19,411	126	—	0·7	—
15. Suffolk	17	2,513	10,834	13,347	2,579	11,126	13,705	358	—	2·7	—
16. Norfolk	22	3,256	16,647	19,903	3,212	16,874	20,086	183	—	0·9	—
Totals	55	9,861	42,674	52,535	10,141	43,061	53,202	667	—	1·3	—
V. SOUTH WESTERN.											
17. Wilts	17	2,188	9,779	11,967	2,138	9,564	11,702	—	265	—	2·2
18. Dorset	12	1,172	8,088	9,260	1,199	8,300	9,499	239	—	2·6	—
19. Devon	20	3,773	23,410	27,183	3,685	23,508	27,193	10	—	0·0	—
20. Cornwall	13	1,729	12,801	14,530	1,650	11,976	13,626	—	904	—	6·2
21. Somerset	17	3,705	21,316	25,021	3,660	20,962	24,622	—	399	—	1·6
Totals	79	12,567	75,394	87,961	12,332	74,310	86,642	—	1,319	—	1·5
VI. WEST MIDLAND.											
22. Gloucester	17	4,837	17,434	22,271	4,547	17,469	22,016	—	255	—	1·1
23. Hereford	8	1,040	4,007	5,047	1,040	4,209	5,249	202	—	4·0	—
24. Salop	15	2,110	4,366	6,476	2,080	4,485	6,565	89	—	1·4	—

PAUPERS OF ALL CLASSES.—COMPARATIVE STATEMENT, **1st January 1881 and 1882,** &c.—*continued.*

DIVISIONS and UNION-COUNTIES.	Unions.	NUMBER OF PAUPERS OF ALL CLASSES RELIEVED						Difference between 1st Jan. 1882 and 1881.		Difference per Cent.	
		ON 1ST JANUARY 1881.			ON 1ST JANUARY 1882.						
		In-door.	Out-door.	TOTAL.	In-door.	Out-door.	TOTAL.				
VI. WEST MIDLAND—*cont.*								Incr.	Decr.	Inc.	Dec.
25. Stafford	17	6,245	30,517	36,762	6,136	30,518	36,654	—	108	—	0·3
26. Worcester	11	2,456	9,170	11,626	2,499	9,626	12,125	499	—	4·3	—
27. Warwick	14	5,623	14,361	19,984	5,233	14,837	20,070	86	—	0·4	—
Totals	82	22,311	79,855	102,166	21,535	81,144	102,679	513	—	0·5	—
VII. NORTH MIDLAND.											
28. Leicester	11	2,046	6,842	8,888	1,942	6,890	8,832	—	56	—	0·6
29. Rutland	2	153	627	780	163	668	831	51	—	6·5	—
30. Lincoln	14	2,445	13,572	16,017	2,593	13,358	19,591	—	66	—	0·4
31. Nottingham	8	1,959	8,151	10,110	1,890	8,163	10,053	—	57	—	0·6
32. Derby	9	1,716	7,853	9,569	1,661	7,779	9,440	—	129	—	1·3
Totals	44	8,319	37,045	45,364	8,249	36,858	45,107	—	257	—	0·6
VIII. NORTH WESTERN.											
33. Chester	12	3,317	11,192	14,509	3,263	10,714	13,977	—	532	—	3·7
34. Lancaster	30	25,010	52,898	77,908	24,060	51,088	75,148	—	2760	—	3·5
Totals	42	28,327	64,090	92,417	27,323	61,802	89,125	—	3,292	—	3·6
IX. YORK.											
35. West Riding	35	9,777	44,882	54,659	9,635	43,842	53,477	—	1,182	—	2·2
36. East Riding	10	2,479	7,723	10,202	2,476	7,912	10,388	186	—	1·8	—
37. North Riding	17	1,610	7,790	9,400	1,568	7,893	9,461	61	—	0·6	—
Totals	62	13,866	60,395	74,261	13,679	59,647	73,326	—	935	—	1·3
X. NORTHERN.											
38. Durham	15	3,823	17,828	21,651	3,614	16,811	20,425	—	1,226	—	5·7
39. Northumberland	12	2,192	9,262	11,454	1,921	8,714	10,635	—	819	—	7·2
40. Cumberland	9	1,360	5,790	7,150	1,338	5,666	7,004	—	146	—	2·0
41. Westmorland	3	407	1,286	1,693	399	1,153	1,552	—	141	—	8·3
Totals	39	7,782	34,166	41,948	7,272	32,344	39,616	—	2,332	—	5·6
XI. WELSH.											
42. Monmouth	6	1,421	9,031	10,452	1,436	8,356	9,792	—	660	—	6·3
43. South Wales	27	3,354	32,652	36,006	3,413	31,303	34,716	—	1,290	—	3·6
44. North Wales	19	1,985	19,377	21,362	2,084	19,560	21,644	282	—	1·3	—
Totals	52	6,760	61,060	67,820	6,933	59,219	66,152	—	1,668	—	2·5
TOTALS of Unions in England	647	195,286	614,055	809,341	193,899	609,482	803,381	—	5,960	—	0·7
Residue of the Kingdom	No Return.	..	..	..	..	..	..	..		..	
TOTALS of England	..	..	..	..	..	..	..	..		..	

No. 54.—Adult Able-bodied Paupers (Male and Female, but exclusive of Vagrants).—Comparative Statement, **1st January 1881 and 1882,** in 647 Unions, having a Population of 25,965,971 Persons; the entire Population of England being 25,968,286 (Census 1881, Preliminary Report).

DIVISIONS and UNION-COUNTIES.	Unions.	NUMBER OF *ADULT*† *ABLE-BODIED* PAUPERS RELIEVED						Difference between 1st Jan. 1882 and 1881.		Difference per Cent.	
		ON 1st JANUARY 1881.			ON 1st JANUARY 1882.						
		In-door.	Out-door.	TOTAL.	In-door.	Out-door.	TOTAL.	Incr.	Decr.	Inc.	Dec.
I. THE METROPOLIS.											
1.*Middlesex (part) -	22	3,936	5,391	9,327	4,032	4,791	8,823	—	504	—	5·4
2.*Surrey (part) -	5	886	1,748	2,634	907	1,867	2,774	140	—	5·3	—
3.*Kent (part) - -	3	501	990	1,491	520	933	1,453	—	38	—	2·5
Totals - -	30	5,323	8,129	13,452	5 459	7,591	13,050	—	402	—	3·0
II. SOUTH EASTERN.											
2.*Surrey (part) -	11	231	1,357	1,588	290	1,384	1,674	86	—	5·4	—
3.*Kent (part) - -	26	1,074	1,725	2,799	1,094	1,761	2,855	56	—	2·0	—
4. Sussex - - -	23	592	1,995	2,587	635	2,062	2,697	110	—	4·3	—
5. Southampton -	26	747	2,106	2,853	762	2,180	2,942	89	—	3·1	—
6. Berks - - -	12	382	977	1,359	397	1,055	1,452	93	—	6·8	—
Totals - -	98	3,026	8,160	11,186	3,178	8,442	11,620	434	—	3·9	—
III. SOUTH MIDLAND.											
1.*Middlesex (part) -	6	283	1,249	1,532	397	1,343	1,740	208	—	13·6	—
7. Hertford - -	12	210	972	1,182	227	1,078	1,305	123	—	10·4	—
8. Buckingham -	7	115	654	769	129	628	757	—	12	—	1·6
9. Oxford - - -	9	221	727	948	225	777	1,002	54	—	5·7	—
10. Northampton -	12	183	952	1,135	175	873	1,048	—	87	—	7·7
11. Huntingdon -	3	75	128	203	64	106	170	—	33	—	16·3
12. Bedford - -	6	140	628	768	134	596	730	—	38	—	4·9
13. Cambridge - -	9	252	975	1,227	218	1,001	1,219	—	8	—	0·7
Totals - -	64	1,479	6,285	7,764	1,569	6,402	7,971	207	—	2·7	—
IV. EASTERN.											
14. Essex - - -	16	450	2,285	2,735	494	2,226	2,720	—	15	—	0·5
15. Suffolk - - -	17	507	1,335	1,842	549	1,399	1,948	106	—	5·8	—
16. Norfolk - -	22	697	2,006	2,703	655	1,993	2,648	—	55	—	2·0
Totals - -	55	1,654	5,626	7,280	1,698	5,618	7,316	36	—	0·5	—
V. SOUTH WESTERN.											
17. Wilts - - -	17	346	975	1,321	300	999	1,299	—	22	—	1·7
18. Dorset - - -	12	164	744	908	163	792	955	47	—	5·2	—
19. Devon - - -	20	466	2,182	2,648	454	2,158	2,612	—	36	—	1·4
20. Cornwall - -	13	241	1,482	1,723	218	1,357	1,575	—	148	—	8·6
21. Somerset - -	17	502	1,983	2,485	453	2,015	2,468	—	17	—	0·7
Totals - -	79	1,719	7,366	9,085	1,588	7,321	8,909	—	176	—	1·9
VI. WEST MIDLAND.											
22. Gloucester - -	17	973	2,045	3,018	884	2,102	2,986	—	32	—	1·1
23. Hereford - -	8	165	366	531	181	372	553	22	—	4·1	—
24 Salop - -	15	241	460	701	221	495	716	15	—	2·1	—

† The term "Adult" has, in the Tables of Pauperism, been always applied to Paupers aged 16 years and upwards.

ADULT ABLE-BODIED PAUPERS.—COMPARATIVE STATEMENT, **1st January 1881 and 1882**, &c. —*continued.*

DIVISIONS and UNION-COUNTIES.	Unions.	NUMBER OF *ADULT ABLE-BODIED* PAUPERS RELIEVED						Difference between 1st Jan. 1882 and 1881.		Difference per Cent.	
		ON 1ST JANUARY 1881.			ON 1ST JANUARY 1882.						
		In-door.	Out-door.	TOTAL.	In-door.	Out-door.	TOTAL.				
VI. WEST MIDLAND—*cont.*								Incr.	Decr.	Inc.	Dec.
25. Stafford	17	1,092	5,243	6,335	978	4,861	5,839	—	496	—	7·8
26. Worcester	11	402	1,088	1,490	395	1,124	1,519	29	—	1·9	—
27. Warwick	14	609	1,772	2,381	528	1,804	2,332	—	49	—	2·1
Totals	82	3,482	10,974	14,456	3,187	10,758	13,945	—	511	—	3·5
VII. NORTH MIDLAND.											
28. Leicester	11	438	767	1,205	364	694	1,058	—	147	—	12·2
29. Rutland	2	31	78	109	21	84	105	—	4	—	3·7
30. Lincoln	14	296	1,484	1,780	331	1,376	1,707	—	73	—	4·1
31. Nottingham	8	281	870	1,151	292	885	1,177	26	—	2·3	—
32. Derby	9	313	1,084	1,397	295	981	1,276	—	121	—	1·7
Totals	44	1,359	4,283	5,642	1,303	4,020	5,323	—	319	—	5·7
VIII. NORTH WESTERN.											
33. Chester	12	634	1,539	2,173	671	1,327	1,998	—	175	—	8·1
34. Lancaster	30	3,380	9,916	13,296	2,631	8,741	11,372	—	1,924	—	14·5
Totals	42	4,014	11,455	15,469	3,302	10,068	13,370	—	2,099	—	13·6
IX. YORK.											
35. West Riding	35	2,001	8,127	10,128	1,947	7,305	9,252	—	876	—	8·6
36. East Riding	10	223	883	1,106	232	835	1,067	—	39	—	3·5
37. North Riding	17	199	1,021	1,220	172	1,070	1,242	22	—	1·8	—
Totals	62	2,423	10,031	12,454	2,351	9,210	11,561	—	893	—	7·2
X. NORTHERN.											
38. Durham	15	541	3,107	3,648	564	2,862	3,426	—	222	—	6·1
39. Northumberland	12	250	1,324	1,574	206	1,138	1,344	—	230	—	14·6
40. Cumberland	9	168	773	941	168	693	861	—	80	—	8·5
41. Westmorland	3	56	133	189	48	102	151	—	38	—	20·1
Totals	39	1,015	5,337	6,352	986	4,796	5,782	—	570	—	9·0
XI. WELSH.											
42. Monmouth	6	173	1,049	1,222	158	854	1,012	—	210	—	17·2
43. South Wales	27	417	4,257	4,674	389	3,848	4,237	—	437	—	9·3
44. North Wales	19	273	1,860	2,133	294	1,890	2,184	51	—	2·4	—
Totals	53	863	7,166	8,029	841	6,592	7,433	—	596	—	7·4
TOTALS of Unions in England	647	26,357	84,812	111,169	25,462	80,818	106,280	—	4,889	—	4·4
Residue of the Kingdom	No Return.	..	..	..	..	..	..	..		..	
TOTALS of England	..	..	..	..	..	..	..	..		..	

No. 55.

Pauperism.—Remarks on the Returns of Pauperism, 1st July 1882.

Pauperism, 1st July.

The present publication contains the Tabulated Returns of 647 Unions. The population of these places, by the Census of 1881 (Preliminary Report), was 25,966,000; and the total number of paupers on the 1st July 1882 was—

In-door.	Out-door.	Gross Total.	Deduct Persons relieved both In-door and Out-door, on the 1st July.	Net Total.
171,192	590,112	761,304	178	761,126

This gives the proportion of paupers as 1 in 34, or 2·9 per cent. on the population, according to the Census of 1881.

First Table.

The first table shows the number of paupers as able-bodied, not able-bodied, and insane; distinguishing those relieved in the workhouse from those relieved out of doors; children relieved with "able-bodied" parents are classed as *able-bodied;* but children relieved without their parents, or relieved with parents who are "not able-bodied," are classed as *not able-bodied.*

Table I.

Paupers, 1st July 1882.	In-door.		Out-door.		Total.
	Able-bodied.	Not Able-bodied.	Able-bodied.	Not Able-bodied.	
Males (Adult) -	6,301	44,571	13,095	76,300	140,267
Females (Adult) -	11,948	33,375	61,600	188,981	295,904
Children under 16 -	14,987	38,558	166,944	34,637	255,126
Vagrants - -	4,749	—	279	—	5,028
Insane, viz.:					
Males - -	—	6,764	—	21,044*	27,808
Females - -	—	9,068	—	26,848*	35,916
Children - -	—	871	—	384*	1,255
Total -	37,985	133,207	241,918	348,194	761,304

* The majority of insane paupers here classed among the out-door are in asylums.

Comparing the numbers returned on the 1st July 1882 with those at the same date in 1881, the figures stand thus :— Second Table. Comparison of 1st July 1882 and 1881.

TABLE II.

DATE.		Number of Unions.	In-door Paupers.	Out-door Paupers.*	TOTAL.
1st July -	1881	647	172,849	600,349	773,198
	1882	647	171,192	589,934	761,126

* Exclusive of those who on the 1st July were in receipt of in-door as well as out-door relief, and therefore already enumerated with the in-door paupers.

The number of paupers of all classes in receipt of relief on the 1st of July 1881 and 1882, with the decrease, is exhibited in the next Table. Third Table.

TABLE III.

DATE.		Unions.	Number of Paupers in Receipt of Relief.	Difference.		Difference per Cent.	
				Incr.	Decr.	Incr.	Decr.
1st July -	1881	647	773,198	—		—	
	1882	647	761,126	—	12,072	—	1·6

The number of adult able-bodied paupers on the 1st July 1881 and 1882 is shown by the next Table. Fourth Table.

TABLE IV.

DATE.		Unions.	Number of *Adult Able-bodied* Paupers.	Difference.		Difference per Cent.	
				Incr.	Decr.	Incr.	Decr.
1st July -	1881	647	98,137	—		—	
	1882	647	92,944	—	5,193	—	5·3

The population, according to the Census of 1881, is printed opposite to each Union County, p. 196, *et seq.*

Local Government Board,
2 November 1882.

FREDERICK PURDY,
Principal of the Statistical Department.

No. 56.—Return of Paupers.—Summary of In-door and Out-door, on the the entire Population of England

DIVISIONS and UNION-COUNTIES.	Unions.	Number of Parishes.	Population, 1881. (Preliminary Census.)	IN-DOOR.										
				Able-Bodied.			Not Able-Bodied.			Lunatics, Insane Persons, and Idiots.			Vagrants relieved in the Workhouse.	Total.
				Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.		
I. THE METROPOLIS.														
1.*Middlesex (part)	22	167	2,548,993	1,447	1,852	2,347	8,403	9,425	6,784	1,578	2,068	343	410	34,657
2.*Surrey (part)	5	17	980,218	235	376	519	2,491	2,565	3,555	427	562	94	125	10,949
3.*Kent (part)	3	11	285,360	187	209	83	646	744	1,306	114	126	37	33	3,485
Totals	30	195	3,814,571	1,869	2,437	2,949	11,540	12,734	11,645	2,119	2,756	474	568	49,091
II. SOUTH EASTERN.														
2.*Surrey (part)	11	138	460,799	44	117	135	984	646	862	55	86	4	171	3,104
3.*Kent (part)	26	425	707,936	263	402	512	1,522	855	1,012	108	173	7	273	5,127
4. Sussex	23	326	494,027	107	240	299	1,036	615	702	109	158	31	206	3,503
5. Southampton	26	355	575,451	195	370	376	1,134	677	969	146	218	9	72	4,166
6. Berks	12	239	247,938	53	151	160	559	251	418	59	63	4	39	1,757
Totals	98	1,483	2,486,151	662	1,280	1,482	5,235	3,044	3,963	477	698	55	761	17,657
III. SOUTH MIDLAND.														
1.*Middlesex (part)	6	58	380,685	87	101	103	626	439	586	33	37	2	50	2,064
7. Hertford	12	165	202,315	34	81	133	485	206	267	29	40	2	87	1,364
8. Buckingham	7	195	155,885	10	58	137	275	146	169	29	40	..	45	909
9. Oxford	9	299	181,564	37	86	139	313	173	264	49	80	3	04	1,208
10. Northampton	12	332	277,002	37	73	89	360	181	364	59	89	7	66	1,325
11. Huntingdon	3	88	53,218	4	26	43	107	60	107	7	8	..	6	368
12. Bedford	6	138	154,249	24	37	38	210	142	203	14	33	..	26	727
13. Cambridge	9	176	191,123	27	73	129	433	178	306	28	41	2	32	1,249
Totals	64	1,451	1,596,041	260	535	811	2,809	1,525	2,266	248	368	16	376	9,214
IV. EASTERN.														
14. Essex	16	373	551,765	77	214	239	1,223	625	903	99	142	17	93	3,632
15. Suffolk	17	525	353,509	149	248	271	545	248	591	65	76	6	39	2,238
16. Norfolk	22	744	437,649	215	314	483	746	325	488	92	147	9	25	2,844
Totals	55	1,642	1,342,923	441	776	993	2,514	1,198	1,982	256	365	32	157	8,714
V. SOUTH WESTERN.														
17. Wilts	17	323	248,644	40	164	238	485	238	433	76	106	4	17	1,801
18. Dorset	12	288	184,936	24	96	111	281	156	230	28	49	1	15	991
19. Devon	20	475	609,157	82	321	445	840	683	688	145	194	11	38	3,447
20. Cornwall	13	221	322,890	2	182	286	329	313	348	35	70	1	2	1,568
21. Somerset	17	496	490,504	97	228	313	851	543	736	150	188	7	42	3,155
Totals	79	1,803	1,856,131	245	991	1,393	2,786	1,933	2,435	434	607	24	114	10,962
VI. WEST MIDLAND.														
22. Gloucester	17	362	525,123	267	393	338	973	592	698	208	337	10	110	3,926
23. Hereford	8	254	118,148	44	76	114	207	99	216	19	27	3	31	836
24. Salop	15	391	265,707	50	114	130	585	254	501	48	111	6	63	1,862

1st July 1882, in 647 Unions, having a Population of 25,965,971 Persons; being 25,968,286 (Census 1881, Preliminary Report).

OUT-DOOR.												DIVISIONS and UNION-COUNTIES.
Able-Bodied.			Not Able-Bodied.			Lunatics, Insane Persons, and Idiots.			Vagrants relieved out of the Workhouse.	Total.	Deduct Persons Relieved both In-door and Out-door on the 1st July, &c.	Net Total of Persons Relieved.	
Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.					
													I. THE METROPOLIS.
748	3,200	8,769	2,012	8,753	1,026	2,242	3,586	12	35	30,383	..	65,040	1.*Middlesex (part).
290	1,385	3,706	801	3,544	267	837	1,127	5	..	11,962	27	22,884	2.*Surrey (part).
82	632	1,613	447	1,966	366	236	328	2	..	5,672	..	9,157	3.*Kent (part).
1,120	5,217	14,088	3,260	14,263	1,659	3,315	5,041	19	35	48,017	27	97,081	- - Totals.
													II. SOUTH EASTERN.
270	953	2,668	1,028	2,551	469	338	473	5	..	8,755	1	11,858	2.*Surrey (part).
219	1,404	4,064	1,663	4,535	599	605	865	21	2	13,977	17	19,087	3.*Kent (part).
479	1,406	3,798	1,910	4,250	706	407	541	8	..	13 505	..	17,008	4. Sussex.
332	1,675	4,192	2,080	5,361	885	567	657	23	..	15,772	..	19,938	5. Southampton.
298	564	1,577	791	1,564	251	281	362	6	11	5,705	..	7,462	6. Berks.
1,598	6,002	16,299	7,472	18,261	2,910	2,198	2,898	63	13	57,714	18	75,353	- - Totals.
													III. SOUTH MIDLAND.
264	952	2,448	686	2,030	272	255	410	5	..	7,322	..	9,386	1.*Middlesex (part).
204	794	1,823	1,161	2,644	388	214	251	5	..	7,484	1	8,847	7. Hertford.
112	445	1,122	862	1,848	256	157	254	1	..	5,057	..	5,966	8. Buckingham.
195	438	1,264	1,120	2,196	408	214	272	5	..	6,112	..	7,320	9. Oxford.
121	658	1,846	1,423	3,086	358	247	291	6	..	8,036	..	9,361	10. Northampton.
21	84	219	234	476	47	67	66	..	..	1,214	..	1,582	11. Huntingdon.
135	395	1,180	895	1,875	229	186	200	8	..	5,103	..	5,830	12. Bedford.
164	653	1,648	1,151	2,875	354	186	248	2	2	7,283	..	8,532	13. Cambridge.
1,216	4,419	11,550	7,532	17,030	2,312	1,526	1,992	32	2	47,611	1	56,824	- - Totals.
													IV. EASTERN.
462	1,547	4,295	1,933	4,292	650	473	650	7	3	14,312	62	17,882	14. Essex.
309	1,025	2,846	1,830	3,585	553	317	414	1	1	10,881	2	13,117	15. Suffolk.
427	1,447	3,662	2,570	6,342	872	412	634	2	..	16,368	..	19,212	16. Norfolk.
1,198	4,019	10,803	6,333	14,219	2,075	1,202	1,698	10	4	41,561	64	50,211	- - Totals.
													V. SOUTH WESTERN.
193	708	1,799	1,693	3,531	497	316	421	5	..	9,163	..	10,964	17. Wilts.
110	589	1,573	1,470	3,270	595	218	247	5	..	8,077	..	9,068	18. Dorset.
373	1,626	4,078	4,115	9,435	1,721	542	763	24	4	22,681	12	26,116	19. Devon.
153	1,121	2,636	1,624	4,607	837	244	353	1	..	11,576	11	13,133	20. Cornwall.
375	1,635	4.528	3,870	7,948	1,487	424	601	17	21	20,906	..	24,061	21. Somerset.
1,204	5,679	14,614	12,772	28,791	5,137	1,744	2,385	52	25	72,403	23	83,342	- - Totals.
													VI. WEST MIDLAND.
347	1.564	4,268	2,484	5,741	1,296	499	625	14	..	16,838	..	20,764	22. Gloucester.
106	298	895	735	1,428	290	177	213	3	..	4,145	..	4,981	23. Hereford.
77	347	955	626	1,377	285	238	342	5	4	4,256	..	6,118	24. Salop.

RETURN OF PAUPERS.—SUMMARY of IN-DOOR and OUT-DOOR, on the **1st July 1882**, England being

DIVISIONS and UNION-COUNTIES.	Unions.	Number of Parishes.	Population, 1881. (Preliminary Census.)	IN-DOOR.										
				ABLE-BODIED.			NOT ABLE-BODIED.			LUNATICS, INSANE PERSONS, AND IDIOTS.			Vagrants relieved in the Workhouse.	TOTAL.
				Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.		
VI. WEST MIDLAND—*cont.*														
25. Stafford	17	280	1,006,741	283	462	581	1,453	766	1,296	214	301	22	260	5,638
26. Worcester	11	233	383,188	93	203	326	602	295	370	55	90	3	112	2,149
27. Warwick	14	272	730,455	87	260	314	1,476	950	910	194	236	14	92	4,533
Totals	82	1,702	3,029,362	824	1,508	1,803	5,296	2,956	3,991	738	1,102	58	668	18,944
VII. NORTH MIDLAND.														
28. Leicester	11	351	326,006	63	144	182	461	237	258	76	81	4	69	1,575
29. Rutland	2	67	23,007	2	10	30	55	15	18	4	2	..	4	140
30. Lincoln	14	760	463,367	48	149	257	692	269	555	58	96	3	32	2,159
31. Nottingham	8	307	438,712	81	132	123	498	220	289	97	106	14	61	1,621
32. Derby	9	278	386,532	99	129	214	382	164	300	69	80	6	80	1,523
Totals	44	1,763	1,637,624	293	564	806	2,088	905	1,420	304	365	27	246	7,018
VIII. NORTH WESTERN.														
33. Chester	12	472	621,544	188	342	321	667	372	768	113	169	8	142	3,090
34. Lancaster	30	480	3,485,611	476	1,342	1,738	5,419	5,218	4,209	1,136	1,378	92	535	21,543
Totals	42	952	4,107,155	664	1,684	2,059	6,086	5,590	4,977	1,249	1,547	100	677	24,633
IX. YORK.														
35. West Riding	35	709	2,197,811	696	824	862	2,100	1,128	1,482	422	534	31	456	8,535
36. East Riding	10	375	362,390	33	138	183	616	372	541	70	117	8	82	2,160
37. North Riding	17	506	334,326	18	85	125	399	219	377	35	51	2	172	1,483
Totals	62	1,590	2,894,527	747	1,047	1,170	3,115	1,719	2,400	527	702	41	710	12,178
X. NORTHERN.														
38. Durham	15	301	875,507	139	310	365	814	429	829	83	126	14	187	3,296
39. Northumberland	12	541	434,024	24	144	207	409	327	391	62	80	3	113	1,760
40. Cumberland	9	208	250,630	20	95	134	277	167	328	43	49	3	42	1,158
41. Westmorland	3	110	64,307	10	21	39	88	34	88	16	17	5	30	348
Totals	39	1,160	1,624,468	193	570	745	1,588	957	1,636	204	272	25	372	6,562
XI. WELSH.														
42. Monmouth	6	164	234,440	23	78	139	394	185	375	25	42	2	10	1,273
43. South Wales	27	648	881,263	52	272	319	698	440	1,041	96	117	9	50	3,094
44. North Wales	19	374	461,315	28	206	318	422	189	427	87	127	8	40	1,852
Totals	52	1,186	1,577,018	103	556	776	1,514	814	1,843	208	286	19	100	6,219
TOTALS of Unions in England	647	14,927*	25,965,971	6,301	11,948	14,987	44,571	33,375	38,558	6,764	9,068	871	4,749	171,192
Residue of the Kingdom	..	5	2,315	No Return.			..	..	..	..	..	..	..	..
TOTALS of England	..	14,931	25,968,286	..	..	..	..	..	..	..	..	..	..	..

* Number of Parishes corrected up to 1st July 1882.

in 647 Unions, having a Population of 25,965,971 Persons; the entire Population of 25,968,286—*continued.*

OUT-DOOR.													DIVISIONS and UNION-COUNTIES.
ABLE-BODIED.			NOT ABLE-BODIED.			LUNATICS, INSANE PERSONS, AND IDIOTS.			Vagrants relieved out of the Workhouse.	TOTAL.	Deduct Persons Relieved both In-door and Out-door on the 1st July, &c.	Net Total of Persons Relieved.	
Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.					
													VI. WEST MIDLAND—*cont.*
948	3,742	9,994	3,954	7,785	2,122	732	726	14	..	30,017	4	35,651	25. Stafford.
256	841	2,428	1,446	3,002	630	350	380	10	..	9,343	..	11,492	26. Worcester.
258	1,385	4,199	1,595	3,820	1,131	777	1,043	18	..	14,226	..	18,759	27. Warwick.
1,992	8,177	22,739	10,840	23,153	5,754	2,778	3,329	64	4	78,825	4	97,765	- - Totals.
													VII. NORTH MIDLAND.
88	596	1,833	1,039	2,205	327	360	400	8	..	6,856	..	8,431	28. Leicester.
14	79	195	114	237	9	32	21	..	..	701	..	841	29. Rutland.
206	1,121	2,905	2,240	5,125	668	336	444	2	3	13,050	14	15,195	30. Lincoln.
100	629	1,902	1,173	2,485	479	390	461	6	..	7,625	..	9,246	31. Nottingham.
168	772	2,123	1,188	2,455	426	306	263	4	4	7,709	..	9,232	32. Derby.
576	3,197	8,958	5,754	12,507	1,909	1,424	1,589	20	7	35,941	14	42,945	- - Totals.
													VIII. NORTH WESTERN.
133	1,148	3,399	1,199	3,162	652	463	566	8	6	10,736	..	13,826	33. Chester.
1,200	6,500	18,764	3,790	11,138	2,216	1,932	2,365	48	50	48,003	17	69,529	34. Lancaster.
1,333	7,648	22,163	4,989	14,300	2,868	2,395	2,931	56	56	58,739	17	83,355	- - Totals.
													IX. YORK.
1,162	5,849	15,907	4,513	10,971	1,897	1,321	1,472	25	4	43,121	1	51,655	35. West Riding.
93	706	1,927	1,103	2,739	600	229	253	1	..	7,651	..	9,811	36. East Riding.
152	857	2,277	1,029	2,407	450	251	288	3	1	7,715	..	9,198	37. North Riding.
1,407	7,412	20,111	6,645	16,117	2,947	1,801	2,013	29	5	58,487	1	70,664	- - Totals.
													X. NORTHERN.
408	2,321	6,389	1,573	4,012	990	555	496	4	1	16,749	..	20,045	38. Durham.
92	991	2,751	779	2,619	455	376	363	4	..	8,430	..	10,190	39. Northumberland.
73	618	1,839	600	1,846	382	189	193	1	64	5,805	..	6,963	40. Cumberland.
5	98	287	181	359	85	51	64	..	17	1,147	..	1,495	41. Westmorland.
578	4,028	11,266	3,133	8,836	1,912	1,171	1,116	9	82	32,131	..	38,693	- - Totals.
													XI. WELSH.
143	709	1,986	1,123	2,626	758	263	332	3	16	7,959	..	9,232	42. Monmouth
482	3,499	8,387	3,657	10,715	2,371	858	1,033	21	19	31,042	6	34,130	43. South Wales.
248	1,594	3,980	2,790	8,163	2,025	374	491	6	11	19,682	3	21,531	44. North Wales.
873	5,802	14,353	7,570	21,504	5,154	1,495	1,856	30	46	58,683	9	64,893	- - Totals.
13,095	61,600	166,944	76,300	188,981	34,637	21,044	26,848	384	279	590,112	178	761,126	TOTALS of Unions in England.
..	..	..	..	..	..	..	..	..	..	..	..	..	Residue of the Kingdom.
..	..	..	..	..	..	..	..	..	..	..	..	..	TOTALS of England.

No. 57.—Paupers of all Classes.—Comparative Statement, **1st July 1881 and 1882,** in 647 Unions, having a Population of 25,965,971 Persons; the entire Population of England being 25,968,286 (Census 1881, Preliminary Report).

DIVISIONS and UNION-COUNTIES.	Unions.	NUMBER OF PAUPERS OF ALL CLASSES RELIEVED						Difference between 1st July 1882 and 1881.		Difference per Cent.	
		ON 1st JULY 1881.			ON 1st JULY 1882.						
		In-door.	Out-door.	TOTAL.	In-door.	Out-door.	TOTAL.				
I. THE METROPOLIS.								Incr.	Decr.	Inc.	Dec.
1.*Middlesex (part) -	22	34,512	30,031	64,543	34,657	30,383	65,040	497	—	0·8	—
2.*Surrey (part) -	5	10,776	11,518	22,294	10,949	11,935	22,884	590	—	2·6	—
3.*Kent (part) - -	3	3,482	5,503	8,985	3,485	5,672	9,157	172	—	1·9	—
Totals - -	30	48,770	47,052	95,822	49,091	47,990	97,081	1,259	—	1·3	—
II. SOUTH EASTERN.											
2.*Surrey (part) -	11	3,097	8,779	11,876	3,104	8,754	11,858	—	18	—	0·2
3.*Kent (part) - -	26	5,098	14,320	19,418	5,127	13,960	19,087	—	331	—	1·7
4. Sussex - - -	23	3,523	13,434	16,966	3,503	13,505	17,008	42	—	0·2	—
5. Southampton -	26	4,022	15,716	19,738	4,166	15,772	19,938	200	—	1·0	—
6. Berks - - -	12	1,714	5,706	7,420	1,757	5,705	7,462	42	—	0·6	—
Totals - -	98	17,463	57,955	75,418	17,657	57,696	75,353	—	65	—	0·1
III. SOUTH MIDLAND.											
1.*Middlesex (part) -	6	2,168	6,703	8,871	2,064	7,322	9,386	515	—	5·8	—
7. Hertford - -	12	1,504	7,331	8,835	1,364	7,483	8,847	12	—	0·1	—
8. Buckingham -	7	887	5,288	6,175	909	5,057	5,966	—	209	—	3·4
9. Oxford - - -	9	1,249	6,221	7,470	1,208	6,112	7,320	—	150	—	2·0
10. Northampton -	12	1,452	8,173	9,625	1,325	8,036	9,361	—	264	—	2·7
11. Huntingdon -	3	377	1,165	1,542	368	1,214	1,582	40	—	2·6	—
12. Bedford - -	6	742	5,376	6,118	727	5,103	5,830	—	288	—	4·7
13. Cambridge - -	9	1,330	7,320	8,650	1,249	7,283	8,532	—	118	—	1·4
Totals - -	64	9,709	47,577	57,286	9,214	47,610	56,224	—	462	—	0·8
IV. EASTERN.											
14. Essex - - -	16	3,570	14,629	18,199	3,632	14,250	17,882	—	317	—	1·7
15. Suffolk - - -	17	2,127	10,985	13,112	2,238	10,879	13,117	5	—	0·0	—
16. Norfolk - -	22	2,753	16,494	19,247	2,844	16,368	19,212	—	35	—	0·2
Totals - -	55	8,450	42,108	50,558	8,714	41,497	50,211	—	347	—	0·7
V. SOUTH WESTERN.											
17. Wilts - - -	17	1,817	9,380	11,197	1,801	9,163	10,964	—	233	—	2·1
18. Dorset - - -	12	1,028	8,171	9,199	991	8,077	9,068	—	131	—	1·4
19. Devon - - -	20	3,392	23,214	26,606	3,447	22,669	26,116	—	490	—	1·8
20. Cornwall - -	13	1,500	12,305	13,805	1,568	11,565	13,133	—	672	—	4·8
21. Somerset - -	17	3,174	21,042	24,216	3,155	20,906	24,061	—	155	—	0·6
Totals -	79	10,911	74,112	85,023	10,962	72,380	83,342	—	1,681	—	2·0
VI. WEST MIDLAND.											
22. Gloucester - -	17	4,169	17,285	21,454	3,926	16,838	20,764	—	690	—	3·2
23. Hereford - -	8	920	4,074	4,994	836	4,145	4,981	—	13	—	0·3
24. Salop - - -	15	1,955	4,462	6,417	1,862	4,256	6,118	—	299	—	4·7

PAUPERS OF ALL CLASSES.—COMPARATIVE STATEMENT, **1st July 1881 and 1882**, &c. —*continued.*

DIVISIONS and UNION-COUNTIES.	Unions.	NUMBER OF PAUPERS OF ALL CLASSES RELIEVED						Difference between 1st July 1882 and 1881.		Difference per Cent.	
		ON 1ST JULY 1881.			ON 1ST JULY 1882.						
		In-door.	Out-door.	TOTAL.	In-door.	Out-door.	TOTAL.				
VI. WEST MIDLAND—*continued.*								Incr.	Decr.	Inc.	Dec.
25. Stafford	17	5,651	31,160	36,811	5,638	30,013	35,651	—	1,160	—	3·2
26. Worcester	11	2,322	9,126	11,448	2,149	9,343	11,492	44	—	0·4	—
27. Warwick	14	4,745	14,175	18,920	4,533	14,226	18,759	—	161	—	0·9
Totals	82	12,762	80,282	100,044	18,944	78,821	97,765	—	2,279	—	2·3
VII. NORTH MIDLAND.											
28. Leicester	11	1,729	6,728	8,457	1,575	6,856	8,431	—	26	—	0·3
29. Rutland	2	137	660	797	140	701	841	44	—	5·5	—
30. Lincoln	14	2,084	13,360	15,444	2,159	13,036	15,195	—	249	—	1·6
31. Nottingham	8	1,707	8,138	9,845	1,621	7,625	9,246	—	599	—	6·1
32. Derby	9	1,561	7,769	9,330	1,523	7,709	9,232	—	98	—	1·1
Totals	44	7,218	36,655	43,873	7,018	35,927	42,945	—	928	—	2·1
VIII. NORTH WESTERN.											
33. Chester	12	2,937	10,675	13,612	3,090	10,736	13,826	214	—	1·6	—
34. Lancaster	30	22,245	49,192	71,437	21,543	47,986	69,529	—	1,908	—	2·7
Totals	42	25,182	59,867	85,049	24,633	58,722	83,355	—	1,694	—	2·0
IX. YORK.											
35. West Riding	35	8,813	45,125	53,938	8,535	43,120	51,655	—	2,283	—	4·2
36. East Riding	10	2,229	7,625	9,854	2,160	7,651	9,811	—	43	—	0·4
37. North Riding	17	1,448	7,612	9,060	1,483	7,715	9,198	138	—	1·5	—
Totals	62	12,490	60,362	72,852	12,178	58,486	70,664	—	2,188	—	3·0
X. NORTHERN.											
38. Durham	15	3,364	16,742	20,106	3,296	16,749	20,045	—	61	—	0·3
39. Northumberland	12	1,889	8,962	10,851	1,760	8,430	10,190	—	661	—	6·1
40. Cumberland	9	1,151	5,934	7,085	1,158	5,805	6,963	—	122	—	1·7
41. Westmorland	3	361	1,236	1,597	348	1,147	1,495	—	102	—	6·4
Totals	39	6,765	32,874	39,639	6,562	32,131	38,693	—	946	—	2·4
XI. WELSH.											
42. Monmouth	6	1,255	8,806	10,061	1,273	7,959	9,232	—	829	—	8·2
43. South Wales	27	3,051	33,441	36,492	3,094	31,036	34,130	—	2,362	—	6·5
44. North Wales	19	1,823	19,258	21,081	1,852	19,679	21,531	450	—	2·1	—
Totals	52	6,129	61,505	67,634	6,219	58,674	64,893	—	2,741	—	4·1
TOTALS of Unions in England	647	172,849	600,349	773,198	171,192	589,934	761,126	—	12,072	—	1·6
Residue of the Kingdom	No Return.	..	..	..	..	..	..	..		..	
TOTALS of England	647	172,849	600,349	773,198	171,192	589,934	761,126	—	12,072	—	1·6

No. 58.—Adult Able-bodied Paupers (Male and Female, but exclusive of Vagrants).—Comparative Statement, **1st July 1881 and 1882,** in 647 Unions, having a Population of 25,965,971 Persons; the entire Population of England being 25,968,286 (Census 1881, Preliminary Report).

DIVISIONS and UNION-COUNTIES.	Unions.	NUMBER OF *ADULT ABLE-BODIED* PAUPERS RELIEVED						Difference between 1st July 1882 and 1881.		Difference per Cent.	
		ON 1st JULY 1881.			ON 1st JULY 1882.						
		In-door.	Out-door.	TOTAL.	In-door.	Out-door.	TOTAL.	Incr.	Decr.	Inc.	Dec.
I. THE METROPOLIS.											
1.*Middlesex (part) -	22	2,906	4,060	6,966	3,299	3,948	7,247	281	—	4·0	—
2.*Surrey (part) -	5	632	1,623	2,255	611	1,675	2,286	31	—	1·4	—
3.*Kent (part) - -	3	384	680	1,064	396	714	1,110	46	—	4·3	—
Totals - -	30	3,922	6,363	10,285	4,306	6,337	10,643	358	—	3·5	—
II. SOUTH EASTERN.											
2.*Surrey (part) -	11	122	1,203	1,325	161	1,223	1,384	59	—	4·5	—
3.*Kent (part) - -	26	637	1,783	2,420	665	1,623	2,288	—	132	—	5·5
4. Sussex - - -	23	355	1,921	2,276	347	1,885	2,232	—	44	—	1·9
5. Southampton -	26	572	2,105	2,677	565	2,007	2,572	—	105	—	3·9
6. Berks - - -	12	256	880	1,136	204	862	1,066	—	70	—	6·2
Totals - -	98	1,942	7,892	9,834	1,942	7,600	9,542	—	292	—	3·0
III. SOUTH MIDLAND.											
1.*Middlesex (part) -	6	210	1,195	1,405	188	1,216	1,404	—	1	—	0·0
7. Hertford - -	12	112	951	1,063	115	998	1,113	50	—	4·7	—
8. Buckingham -	7	65	606	671	68	557	625	—	46	—	6·9
9. Oxford - - -	9	122	646	768	123	633	756	—	12	—	1·6
10. Northampton -	12	136	905	1,041	110	779	889	—	152	—	14·6
11. Huntingdon -	3	35	94	129	30	105	135	6	—	4·7	—
12. Bedford - -	6	48	621	669	61	530	591	—	78	—	11·7
13. Cambridge - -	9	98	954	1,052	100	817	917	—	135	—	12·8
Totals - -	64	826	5,972	6,798	795	5,635	6,430	—	368	—	5·4
IV. EASTERN.											
14. Essex - - -	16	258	2,129	2,387	291	2,009	2,300	—	87	—	3·6
15. Suffolk - - -	17	393	1,366	1,759	397	1,334	1,731	—	28	—	1·6
16. Norfolk - -	22	507	1,913	2,420	529	1,874	2,403	—	17	—	0·7
Totals - -	55	1,158	5,408	6,566	1,217	5,217	6,434	—	132	—	2·0
V. SOUTH WESTERN.											
17. Wilts - - -	17	205	930	1,135	204	901	1,105	—	30	—	2·6
18. Dorset - - -	12	116	792	908	120	699	819	—	89	—	9·8
19. Devon - -	20	385	2,115	2,500	403	1,999	2,402	—	98	—	3·9
20. Cornwall - -	13	187	1,385	1,572	184	1,274	1,458	—	114	—	7·3
21. Somerset - -	17	348	2,112	2,460	325	2,010	2,335	—	125	—	5·1
Totals - -	79	1,241	7,334	8,575	1,236	6,883	8,119	—	456	—	5·3
VI. WEST MIDLAND.											
22. Gloucester - -	17	673	2,083	2,756	660	1,911	2,571	—	185	—	6·7
23. Hereford - -	8	132	375	507	120	404	524	17	—	3·4	—
24. Salop - - -	15	185	484	669	164	424	588	—	81	—	12·1

ADULT ABLE-BODIED PAUPERS.—COMPARATIVE STATEMENT, **1st July 1881 and 1882,** &c. —*continued.*

DIVISIONS and UNION-COUNTIES.	Unions.	NUMBER OF *ADULT ABLE-BODIED* PAUPERS RELIEVED						Difference between 1st July 1882 and 1881.		Difference per Cent.	
		ON 1ST JULY 1881.			ON 1ST JULY 1882.						
		In-door.	Out-door.	TOTAL.	In-door.	Out-door.	TOTAL.				
VI. WEST MIDLAND—*continued.*								Incr.	Decr.	Inc.	Dec.
25. Stafford	17	817	5,349	6,166	745	4,690	5,435	—	731	—	11·9
26. Worcester	11	320	1,037	1,357	296	1,097	1,393	36	—	2·7	—
27. Warwick	14	405	1,668	2,073	347	1,643	1,990	—	83	—	4·0
Totals	82	2,532	10,996	13,528	2,332	10,169	12,501	—	1,027	—	7·6
VII. NORTH MIDLAND.											
28. Leicester	11	282	657	939	207	684	891	—	48	—	5·1
29. Rutland	2	18	92	110	12	93	105	—	5	—	4·5
30. Lincoln	14	214	1,481	1,695	197	1,327	1,524	—	171	—	10·1
31. Nottingham	8	207	839	1,046	213	729	942	—	104	—	9·9
32. Derby	9	214	986	1,200	228	940	1,168	—	32	—	2·7
Totals	44	935	4,055	4,990	857	3,773	4,630	—	360	—	7·2
VIII. NORTH WESTERN.											
33. Chester	12	533	1,340	1,873	530	1,281	1,811	—	62	—	3·3
34. Lancaster	30	2,557	8,283	10,840	1,818	7,700	9,518	—	1,322	—	12·2
Totals	42	3,090	9,623	12,713	2,348	8,981	11,329	—	1,384	—	10·9
IX. YORK.											
35. West Riding	35	1,615	7,591	9,206	1,520	7,011	8,531	—	675	—	7·3
36. East Riding	10	186	824	1,010	171	799	970	—	40	—	4·0
37. North Riding	17	134	990	1,124	103	1,009	1,112	—	12	—	1·1
Totals	62	1,935	9,405	11,340	1,794	8,819	10,613	—	727	—	6·4
X. NORTHERN.											
38. Durham	15	430	2,839	3,269	449	2,729	3,178	—	91	—	2·8
39. Northumberland	12	170	1,215	1,385	168	1,083	1,251	—	134	—	9·7
40. Cumberland	9	155	783	938	115	691	806	—	132	—	14·1
41. Westmorland	3	27	117	144	31	103	134	—	10	—	6·9
Totals	39	782	4,954	5,736	763	4,606	5,369	—	367	—	6·4
XI. WELSH.											
42. Monmouth	6	120	950	1,070	101	852	953	—	117	—	10·9
43. South Wales	27	338	4,393	4,731	324	3,981	4,305	—	426	—	9·0
44. North Wales	19	219	1,752	1,971	234	1,842	2,076	105	—	5·3	—
Totals	52	677	7,095	7,772	659	6,675	7,334	—	438	—	5·6
TOTALS of Unions in England	647	19,040	79,097	98,137	18,249	74,695	92,944	—	5,193	—	5·3
Residue of the Kingdom	No Return.	..	..	..	..	..	..	..		..	
TOTALS of England	647	19,040	79,097	98,137	18,249	74,695	92,944	—	5,193	—	5·3

No. 59.—Census of Paupers on the **1st January** and on the **1st July**.—

Number of Unions, &c.	Census of Paupers on *First* Day of—	IN-DOOR.										
		Able-Bodied.			Not Able-Bodied.			Lunatics, Insane Persons, and Idiots.			Vagrants.	Total.
		Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.		
646	January 1861	7,589	15,813	19,441	29,227	21,735	28,480	3,512	4,837	327	1,179	132,140
647	July 1861	4,274	12,537	15,679	24,554	20,121	27,840	3,547	5,010	652	1,798	116,012
649	January 1862	8,737	17,841	22,247	31,091	22,745	29,899	3,546	4,912	345	1,828	143,191
651	July 1862	4,706	13,388	16,664	26,321	21,241	29,014	3,778	5,245	649	2,426	123,432
653	January 1863	9,098	17,403	21,224	32,344	23,447	30,599	3,799	5,210	381	2,692	146,197
655	July 1863	4,967	13,044	16,434	27,186	21,390	29,721	3,898	5,441	543	2,744	125,368
655	January 1864	7,733	15,930	19,066	31,951	23,077	30,430	3,855	5,346	386	1,976	139,750
655	July 1864	4,285	11,595	14,419	27,041	21,332	29,003	4,038	5,648	377	2,348	120,086
655	January 1865	8,040	15,360	18,097	33,117	23,304	30,476	3,879	5,486	360	2,055	140,174
655	July 1865	4,390	11,596	13,829	27,427	21,806	29,501	4,099	5,803	385	2,864	121,700
655	January 1866	7,270	15,020	17,051	33,331	24,017	31,159	4,092	5,663	383	3,166	141,152
655	July 1866	4,275	11,417	14,149	28,064	22,481	29,735	4,242	5,941	356	3,047	123,707
655	January 1867	7,851	15,548	18,537	34,940	24,859	32,377	4,258	5,869	390	3,566	148,195
655	July 1867	5,019	13,234	16,334	29,626	23,213	31,668	4,394	6,280	429	3,854	134,051
655	January 1868	10,594	18,052	21,583	36,948	26,376	34,494	4,384	5,864	428	4,357	163,080
655	July 1868	5,688	13,973	16,800	32,121	24,053	34,728	4,471	5,945	411	6,033	144,233
655	January 1869	11,268	18,558	21,881	38,927	25,419	35,868	4,653	6,053	444	5,346	168,417
653	July 1869	5,973	13,927	16,377	32,660	24,018	34,650	4,480	5,995	461	5,104	143,645
649	January 1870	12,424	17,965	20,780	40,937	26,230	35,616	4,715	6,184	473	4,147	169,471
648	July 1870	6,833	13,271	15,849	34,269	23,879	33,648	4,634	6,225	473	5,513	144,594
648	January 1871	12,714	16,606	20,139	41,579	26,912	35,235	5,061	6,585	58	2,784	168,073
647	July 1871	6,277	12,662	14,223	34,159	24,694	33,024	5,429	7,101	543	3,440	141,552
647	January 1872	9,719	15,316	16,721	39,689	26,078	33,089	5,601	7,491	529	2,562	156,795
647	July 1872	5,068	11,541	13,379	32,837	24,694	31,189	5,691	7,563	557	1,987	134,506
647	January 1873	7,999	14,054	16,149	39,811	26,845	32,362	5,872	7,935	579	2,565	154,171
647	July 1873	4,641	11,210	13,211	33,126	25,582	30,910	5,822	7,910	569	2,154	135,135
647	January 1874	7,323	13,270	15,112	39,457	27,582	31,891	6,024	8,319	580	2,721	152,279
647	July 1874	4,841	10,937	12,882	33,948	26,121	31,001	6,139	8,508	561	3,006	137,944
647	January 1875	8,289	12,907	15,099	41,488	28,365	32,080	6,243	8,613	627	1,944	155,655
649	July 1875	4,483	9,581	11,657	33,277	26,127	31,089	6,056	8,474	644	2,850	134,238
649	January 1876	6,645	11,410	13,807	41,036	28,713	31,830	6,193	8,674	623	2,999	151,930
650	July 1876	4,370	9,530	11,929	35,147	27,764	30,875	6,160	8,752	646	3,028	138,201
650	January 1877	7,206	11,787	14,500	43,716	30,834	33,096	6,465	8,943	644	3,830	161,021
649	July 1877	4,566	10,077	12,947	37,680	29,539	33,268	6,416	8,888	696	2,940	147,017
649	January 1878	8,053	13,354	16,331	45,878	31,939	35,096	6,621	8,890	713	4,546	171,421
649	July 1878	4,839	10,730	13,967	39,347	30,793	35,156	6,505	8,800	719	3,306	154,162
649	January 1879	9,155	13,495	16,751	49,745	33,567	36,565	6,613	8,767	687	4,196	179,541
649	July 1879	6,376	11,801	14,719	42,969	31,716	36,617	6,433	8,637	777	6,938	166,983
649	January 1880	11,472	15,519	19,551	53,281	34,508	38,579	6,714	8,906	774	5,347	194,651
647	July 1880	6,406	12,267	16,057	44,098	32,571	37,642	6,655	8,882	839	7,041	172,458
647	January 1881	11,152	15,205	18,945	53,262	35,058	39,100	6,856	9,078	782	5,848	195,286
647	July 1881	6,624	12,416	15,663	44,340	32,917	38,590	6,656	8,864	803	5,976	172,849
647	January 1882	10,506	14,956	18,521	52,822	35,221	39,653	6,827	9,036	891	5,466	193,899
647	July 1882	6,301	11,948	14,987	44,571	33,375	38,558	6,764	9,068	871	4,749	171,192

Note.—The corresponding table to this, but with a more detailed classification, will be found at page 196 of the Eleventh Annual Report of the Poor Law Board, where the particulars are given in reference to periods commencing with January 1849.

SERIAL STATEMENT from **1861** to **1882** in a given Number of Unions in England.

OUT-DOOR.											Deduct Persons Relieved, &c.*	Net Total of Persons Relieved.	Number of Paupers in Receipt of Relief on the *First* Day of—
ABLE-BODIED.			NOT ABLE-BODIED.			LUNATICS, INSANE PERSONS, AND IDIOTS.			Vagrants Relieved out of the Workhouse.	Total out of the Workhouse.			
Males.	Females.	Children under 16.	Males.	Females.	Children under 16.	Males.	Females.	Children under 16.					
32,654	94,470	224,734	101,900	230,673	49,957	10,516	13,333	362	762	760,224	496	891,868	January 1861.
28,679	91,487	212,754	99,161	229,797	48,375	10,567	13,521	363	907	736,058	496	851,574	July 1861.
38,247	102,821	243,073	103,898	236,580	51,876	10,996	14,087	329	1,002	803,657	682	946,166	January 1862.
36,812	104,961	242,804	103,827	236,877	51,610	10,840	13,867	371	1,180	803,706	880	926,258	July 1862.
73,211	153,787	323,623	111,570	248,379	57,470	11,484	14,789	355	1,542	997,021	594	1,142,624	January 1863.
46,566	122,131	267,433	109,319	246,545	55,150	11,420	14,520	390	1,384	875,199	593	999,974	July 1863.
44,606	118,485	265,890	110,684	249,052	54,211	12,063	15,401	367	1,162	872,644	641	1,011,753	January 1864.
31,229	100,911	230,075	106,374	242,883	51,983	11,876	14,954	319	1,021	792,328	537	911,877	July 1864.
38,226	108,510	248,153	109,877	246,610	53,416	12,465	15,781	371	1,284	835,490	892	974,772	January 1865.
27,921	95,720	219,709	105,397	241,005	50,551	12,320	15,529	370	947	770,046	455	891,291	July 1865.
29,746	97,284	225,515	106,213	242,232	51,960	12,883	16,279	395	1,303	784,170	509	924,813	January 1866.
26,601	93,312	217,081	103,428	239,034	48,880	12,694	15,825	372	1,028	758,610	869	881,448	July 1866.
33,878	101,031	239,465	107,253	247,005	54,690	13,331	16,824	418	1,461	815,815	810	963,200	January 1867.
29,083	97,329	230,332	105,762	244,825	52,901	13,355	16,676	379	1,394	792,252	759	925,544	July 1867.
42,893	114,091	269,956	111,145	252,014	53,041	14,133	17,645	473	1,772	877,872	849	1,040,103	January 1868.
32,019	103,528	244,429	108,953	251,394	51,750	14,399	17,906	555	1,913	828,095	941	971,387	July 1868.
40,427	112,909	268,146	112,985	257,145	51,415	14,818	18,431	418	1,674	878,991	839	1,046,569	January 1869.
31,277	103,798	246,454	110,389	255,879	50,557	14,995	18,577	446	1,588	834,475	420	977,700	July 1869.
44,810	118,890	281,746	116,515	264,014	53,058	15,368	19,151	453	1,283	915,727	377	1,084,821	January 1870.
31,196	103,655	246,563	112,483	260,600	52,392	15,927	19,312	418	1,117	843,663	385	987,872	July 1870.
44,112	116,407	282,087	117,681	265,638	54,784	15,952	19,772	506	951	917,890	302	1,085,661	January 1871.
28,801	100,328	242,779	112,013	259,962	51,592	15,747	19,553	423	853	832,051	309	973,294	July 1871.
29,793	98,925	238,683	111,098	257,535	51,385	15,895	19,936	534	816	824,600	353	981,042	January 1872.
20,990	84,553	206,792	102,159	244,876	46,382	15,922	20,143	562	385	742,764	265	877,005	July 1872.
22,044	83,600	204,683	100,662	242,605	45,523	16,068	20,338	461	462	736,446	245	890,372	January 1873.
17,597	76,198	189,506	93,828	231,932	41,235	16,095	20,457	407	331	687,586	198	822,523	July 1873.
18,245	75,486	187,798	93,241	228,557	40,290	16,426	20,656	422	368	680,483	392	832,370	January 1874.
15,633	70,190	174,981	88,301	221,640	37,227	16,752	21,012	375	293	646,404	342	784,006	July 1874.
20,166	73,847	182,055	88,949	221,010	37,318	17,122	21,370	429	291	662,557	390	817,822	January 1875.
14,460	66,445	164,987	82,118	210,078	34,524	17,239	21,684	381	352	612,268	441	746,065	July 1875.
14,940	64,070	161,942	80,686	206,099	33,610	17,424	22,017	336	295	601,419	462	752,887	January 1876.
12,441	59,649	151,746	75,802	197,706	31,780	17,602	22,198	378	339	569,641	467	707,375	July 1876.
13,680	60,133	153,798	75,607	195,979	31,726	17,874	22,482	360	343	571,982	480	732,523	January 1877.
12,814	59,188	152,168	73,774	191,569	31,614	18,224	23,044	380	383	563,158	242	709,933	July 1877.
14,971	61,549	160,162	73,856	191,275	31,841	18,483	23,509	375	562	576,583	193	747,811	January 1878.
14,153	61,286	160,158	72,421	188,585	31,582	19,037	23,941	390	326	571,879	211	725,830	July 1878.
24,480	71,803	185,895	75,470	190,847	33,197	18,969	24,135	437	458	625,691	152	805,080	January 1879.
18,834	68,331	178,675	73,900	187,752	33,071	19,261	24,456	381	727	605,388	165	772,206	July 1879.
24,734	74,503	197,636	78,168	193,456	35,422	19,514	24,981	406	567	649,387	184	843,854	January 1880.
15,187	64,971	173,876	75,933	189,740	34,478	19,732	25,230	401	701	600.249	174	774,533	July 1880.
17,816	66,996	178,699	77,281	191,642	35,193	20,178	25,665	395	367	614,232	177	809,341	January 1881.
14,468	64,629	172,607	76,636	189,961	34,526	20,577	26,231	392	485	600,512	163	773,198	July 1881.
15,946	64,872	175,320	77,843	191,774	35,673	20,957	26,481	427	301	609,594	112	803,381	January 1882.
13,095	61,600	166,944	76,300	188,981	34,637	21,044	26,848	384	279	590,112	178	761,126	July 1882.

* The figures placed in this column represent the number of persons relieved, both in-door and out-door, on the 1st January (or July), and therefore entered in the in-door and out-door totals on that day; also those non-settled paupers whose relief had been transferred to the accounts of the unions to which it was chargeable.

*** The population for each year is given at page 169.

No. 60.

MEAN NUMBER of PAUPERS of ALL CLASSES and of the ADULT ABLE-BODIED in ENGLAND for 34 Years, 1849–82.

Years ended at Lady-day.	The Mean Number of *Paupers of all Classes* (including Children) at one time in receipt of Relief in England.			Ratio per Cent. of Paupers relieved on the Population.	The Mean Number of *Adult Able-bodied Paupers* (exclusive of Vagrants) at one time in receipt of Relief in England.			Ratio per Cent. of Adult Able-bodied Paupers on the Total Number of Paupers of all Classes relieved.	Average Price of Wheat per Quarter.
	In-door.	Out-door.	Total.		In-door.	Out-door.	Total.		s. d.
1849	133,513	955,146	1,088,659	6·2	26,558	202,265	228,823	21·0	49 1
1850	123,004	885,696	1,008,700	5·7	24,095	167,815	191,910	19·0	42 7
1851	114,367	826,948	941,315	5·3	20,876	142,248	163,124	17·3	39 11
1852	111,323	804,352	915,675	5·0	18,455	130,705	149,160	16·3	39 4
1853	110,148	776,214	886,362	4·8	17,649	121,926	139,575	15·7	42 0
1854	111,635	752,982	864,617	4·6	18,237	116,954	135,191	15·6	61 7
1855	121,400	776,286	897,686	4·8	20,669	125,962	146,631	16·3	70 0
1856	124,879	792,205	917,084	4·8	21,359	132,869	154,228	16·8	75 4
1857	122,845	762,165	885,010	4·6	19,660	120,415	140,075	15·8	65 3
1858	122,613	786,273	908,886	4·7	19,931	133,838	153,769	16·9	53 10
1859	121,232	744,214	865,446	4·4	18,209	117,575	135,784	15·7	42 9
1860	113,507	731,126	844,633	4·3	16,268	115,852	132,120	15·6	44 9
1861	125,866	758,055	883,921	4·4	20,396	125,380	145,776	16·5	55 10
1862	132,236	784,906	917,142	4·5	22,136	133,166	155,302	16·9	56 7
1863	136,907	942,475	1,079,382	5·3	22,431	199,318	221,749	20·5	52 1
1864	133,761	881,217	1,014,978	4·9	21,026	167,396	188,422	18·6	43 2
1865	131,312	820,586	951,899	4·6	19,819	140,705	160,524	16·9	39 8
1866	132,776	783,376	916,152	4·3	19,363	126,460	145,823	15·9	43 6
1867	137,310	794,236	931,546	4·4	19,740	128,685	148,425	16·0	53 7½
1868	150,040	842,600	992,646	4·6	23,680	143,110	166,790	16·8	67 6½
1869	157,740	860,400	1,018,140	4·7	24,960	145,750	170,710	16·8	58 3
1870	156,800	876,000	1,032,800	4·7	25,200	149,600	174,800	16·9	46 2
1871	156,430	880,930	1,037,360	4·6	24,700	147,760	172,460	16·6	49 8½
1872	149,200	828,000	977,200	4·2	22,000	128,930	150,930	15·4	57 1
1873	144,338	739,350	883,688	3·8	19,331	105,594	124,925	14·1	57 2
1874	143,707	683,739	827,446	3·5	18,222	93,763	111,985	13·5	60 3
1875	146,800	654,114	800,914	3·4	18,487	89,918	108,405	13·5	50 11
1876	143,084	606,392	749,476	3·1	16,059	79,958	96,017	12·8	45 5
1877	149,611	570,338	719,949	2·9	16,446	72,952	89,398	12·4	48 2
1878	159,219	569,870	729,089	2·9	18,025	74,261	92,286	12·5	56 8
1879	166,852	598,603	765,455	3·0	19,109	85,861	104,970	13·7	43 7
1880	180,817	627,213	808,030	3·2	22,584	93,201	115,785	14·3	45 4½
1881	183,872	607,065	790,937	3·0	22,515	82,485	105,000	13·3	43 7
1882	183,374	604,915	788,289	3·0	22,251	79,957	102,208	13·0	46 2

No. 61.

METROPOLITAN PAUPERISM.—COMPARATIVE STATEMENT of the NUMBER of PAUPERS (except Lunatic Paupers in Asylums, and Vagrants), on the last Day of the last Week of each Quarter in the Years 1881 and 1882.

No. 61.—Metropolitan Pauperism.—Comparative Statement of the Number of the last Week of each Quarter

Districts and Unions.	Number of Paupers on the last Day					
	Lady-day Quarter.		Difference per Cent.	Midsummer Quarter.		Difference per Cent.
	1881.	1882.		1881.	1882.	
West District.			Incr. Decr.			Incr. Decr.
Kensington	1,899	1,917		1,658	1,763	
Fulham	1,751	1,807		1,603	1,595	
Paddington	1,275	1,211		1,192	1,134	
Chelsea	2,023	2,072	- - 2·4	1,864	1,908	- - 0·7
St. George's	3,266	2,942		2,806	2,660	
Westminster	1,146	1,143		1,035	1,027	
Totals	11,360	11,092		10,158	10,087	
North District.						
St. Marylebone	4,933	4,813		4,466	4,358	
Hampstead	459	458		465	445	
St. Pancras	7,720	7,126	- - 5·6	6,321	6,158	- - 3·0
Islington	5,572	5,021		4,753	4,724	
Hackney	4,560	4,519		4,022	3,747	
Totals	23,244	21,937		20,027	19,432	
Central District.						
St. Giles and St. George Bloomsbury	1,864	1,740		1,654	1,548	
Strand	1,188	1,207		1,118	1,173	
Holborn	7,602	7,590	- - 3·0	6,996	6,940	- - 1·7
City of London	4,434	4,104		4,060	3,931	
Totals	15,088	14,641		13,828	13,592	
East District.						
Shoreditch	2,783	2,887		2,795	2,685	
Bethnal Green	2,772	3,000		2,622	2,802	
Whitechapel	1,525	1,445		1,408	1,377	
St. George-in-the-East	1,554	1,608	3·0 - -	1,341	1,442	2·4 - -
Stepney	1,146	1,157		1,077	1,060	
Mile End Old Town	2,014	2,002		1,900	1,974	
Poplar	3,101	3,249		2,864	3,006	
Totals	14,895	15,348		14,007	14,346	
South District.						
St. Saviour Southwark	6,127	6,292		5,685	5,797	
St. Olave Southwark	3,485	3,509		3,411	3,328	
Lambeth	6,368	6,538		5,750	6,063	
Wandsworth and Clapham	2,673	2,704		2,535	2,572	
Camberwell	2,957	2,936	2·6 - -	2,620	2,686	2·0 - -
Greenwich	4,774	4,772		4,164	4,041	
Woolwich	3,468	3,552		3,017	3,105	
Lewisham	1,304	1,654		1,202	1,368	
Totals	31,156	31,957		28,384	28,960	
Total of the Metropolis	95,743	94,975	- - 0·8	86,404	86,417	0·0 - -

of Paupers (except Lunatic Paupers in Asylums, and Vagrants), on the last Day in the Years **1881** and **1882.**

of the last Week in each Quarter.						
Michaelmas Quarter.		Difference per Cent.	Christmas Quarter.		Difference per Cent.	Districts and Unions.
1881.	1882.		1881.	1882.		
		Incr. Decr.			Incr. Decr.	West District.
1,781	1,888		1,919	2,106		Kensington.
1,615	1,702		1,924	1,987		Fulham.
1,199	1,165		1,231	1,237		Paddington.
1,804	2,055	3·2 - -	2,053	2,401	3·8 - -	Chelsea.
2,805	2,720		3,095	2,949		St. George's.
1,079	1,085		1,155	1,130		Westminster
10,283	10,615		11,377	11,810		
						North District.
4,591	4,570		4,763	4,705		St. Marylebone.
413	400		471	400		Hampstead.
6,391	6,397	2·1 - -	7,128	7,241	3·0 - -	St. Pancras.
4,836	5,038		5,190	5,348		Islington.
3,604	3,850		4,436	4,949		Hackney.
19,835	20,255		21,988	22,643		
						Central District.
1,638	1,560		1,757	1,690		St. Giles and St. George Bloomsbury.
1,142	1,211		1,221	1,273		Strand.
6,901	7,054	1·0 - -	7,468	7,699	0·3 - -	Holborn.
3,966	3,957		4,276	4,098		City of London.
13,647	13,782		14,722	14,760		
						East District.
2,656	2,791		2,900	2,979		Shoreditch.
2,747	2,920		2,894	3,321		Bethnal Green.
1,317	1,295		1,523	1,544		Whitechapel.
1,329	1,513	3·1 - -	1,546	1,654	2·8 - -	St. George-in-the-East.
1,060	1,023		1,144	1,081		Stepney.
2,029	1,838		2,099	2,037		Mile End Old Town.
2,887	3,083		3,327	3,247		Poplar.
14,025	14,463		15,433	15,863		
						South District.
5,755	5,989		6,295	6,360		St. Saviour Southwark.
3,422	3,238		3,519	3,326		St. Olave Southwark.
5,819	6,246		6,458	6,696		Lambeth.
2,539	2,711		2,757	2,672		Wandsworth and Clapham.
2,659	2,663	3·9 - -	3,064	3,105	- - 0·3	Camberwell
3,929	4,084		4,422	4,370		Greenwich.
2,932	3,050		3,509	3,259		Woolwich.
1,298	1,485		1,693	1,823		Lewisham.
28,353	29,466		31,717	31,611		
86,134	88,581	2·8 - -	95,237	96,687	1·5 - -	

No. 62.

METROPOLITAN DISTRICT.—AREA, POPULATION, PAUPERISM, COST of RELIEF, RATEABLE VALUE, and the RATE in the £ for the RELIEF of the POOR in the METROPOLIS, during the Parochial Year 1882.

Reference Number.	UNIONS.	Area in Acres.	POPULATION in 1881.	PAROCHIAL YEAR 1882.			RATEABLE VALUE in force at Lady-day 1881.	Rate in the £ for Relief.
				AVERAGE PAUPERISM.*		TOTAL RELIEF TO THE POOR.†		
				In-door.	Out-door.			
	WEST DISTRICT.					£	£	s. d.
1*a*	Kensington	2,190	162,924	1,571	514	107,159	1,648,187	1 3½
1*b*	Fulham	4,003	114,811	831	1,069	36,499	545,854	1 4
1*c*	Paddington	1,251	107,098	934	597	56,836	1,190,060	0 11½
2	Chelsea	796	88,101	1,365	718	39,417	465,353	1 8½
3	St. George's	1,943	149,603	2,157	1,256	137,536	2,281,619	1 2½
4	Westminster	216	46,456	838	402	44,262	787,566	1 1½
	NORTH DISTRICT.							
5	St. Marylebone	1,506	155,004	3,085	1,906	113,330	1,383,987	1 7⅗
6	Hampstead	2,248	45,436	287	212	19,599	424,490	0 11
7	St. Pancras	2,672	236,209	3,408	3,644	116,057	1,522,882	1 6¼
8	Islington	3,107	282,628	1,949	3,373	93,815	1,445,913	1 3⅕
9	Hackney	3,935	186,400	1,500	2,982	77,496	942,240	1 7⅘
	CENTRAL DISTRICT.							
10	St. Giles and St. George Bloomsbury	245	45,257	1,133	677	34,773	358,418	1 11¼
11	Strand	399	33,419	882	419	48,673	700,441	1 4⅘
12	Holborn	784	151,716	3,822	4,279	108,977	928,319	2 4¼
13	City of London	655	51,401	1,893	2,673	210,502	3,542,406	1 2⅘
	EAST DISTRICT.							
14	Shoreditch	648	126,565	1,826	1,538	57,404	580,411	1 11¾
15	Bethnal Green	755	127,006	1,903	1,341	37,761	357,879	2 1½
16	Whitechapel	378	71,350	1,432	383	34,809	370,334	1 10½
17	St. George-in-the-East	243	47,011	1,389	303	23,943	199,237	2 4⅗
18	Stepney	462	58,500	1,023	309	35,313	318,469	2 2⅓
19	Mile End Old Town	679	105,573	1,358	915	33,189	338,344	1 11¾
20	Poplar	2,335	156,525	1,653	1,661	65,043	673,635	1 11¼
	SOUTH DISTRICT.							
21	St. Saviour's Southwark	1,119	195,111	3,584	3,180	87,113	939,853	1 10¼
22	St. Olave's Southwark	1,503	134,586	2,048	1,755	72,244	779,941	1 10¼
23	Lambeth	3,941	253,569	2,601	4,113	110,265	1,288,231	1 8½
24	Wandsworth and Clapham	11,488	210,397	1,368	1,612	71,466	1,190,661	1 2½
25	Camberwell	4,450	186,555	1,672	1,401	65,595	803,413	1 7½
26	Greenwich	3,426	131,264	2,012	2,595	66,431	617,252	2 1⅘
27	Lewisham	11,436	73,314	509	1,021	42,339	623,059	1 4½
28	Woolwich	6,500	80,782	1,102	2,340	42,354	280,191	3 0¼
	TOTAL of the METROPOLITAN UNIONS	75,313	3,814,571	51,135	49,188	2,090,200	27,525,645	1 6¼

* This is the average of all classes of paupers in receipt of relief on 1st July and 1st January.
† These are the adjusted amounts effected through payments to, and receipts from, the Metropolitan Common Poor Fund.

FREDERICK PURDY,
Statistical Department.

No. 63.

SUMMARY of RETURNS of OUT-DOOR RELIEF ARRANGEMENTS (METROPOLIS), Year ended 25th December 1881.

No. 63.—Summary of Returns of Out-door Relief Arrangements

	Unions and Single Parishes.	Number of		No. of Applications (first and renewed) received for relief of any kind.	Number of Persons in respect of whom was given during the					
					Adult Males, except Insane.		Adult Females, except Insane.			Total of Adults except Insane.
							Able-bodied.			
		Relieving Officers.	Assistants, Pay Clerk, Distributors, &c.		Able-bodied.	Not Able-bodied.	Widows and Single Women with Children dependent.	Other.	Not Able-bodied.	
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
W. District.	Kensington	5	1	7,706	266	77	114	213	247	917
	Fulham	3	—	5,607	582	192	243	618	477	2,112
	Paddington	3	—	4,344	258	164	239	226	672	1,559
	Chelsea	3	—	8,533	1,034	255	480	823	637	3,229
	St. George's	6	3	11,056	172	164	159	213	683	1,391
	Westminster	2	1	2,128	227	52	143	226	170	818
N. District.	St. Marylebone	6	2	14,614	2,057	687	711	1,399	1,369	6,223
	St. Pancras	9	2	27,595	2,189	915	1,145	2,015	2,654	8,918
	Hampstead	1	—	918	58	16	46	49	66	235
	Islington	9	1	26,417	2,184	587	970	2,396	1,486	7,623
	Hackney	9	—	18,252	1,619	457	653	1,590	1,281	5,600
Central District.	St. Giles and St. George, Bloomsbury.	2	1	3,950	28	105	155	74	255	617
	Strand	1	1	2,786	224	83	102	189	180	778
	Holborn	7	—	31,290	2,274	665	1,026	1,647	1,979	7,591
	London, City of	6	—	11,757	700	359	351	618	1,315	3,343
E. District.	Shoreditch	4	2	9,629	711	684	442	786	1,898	4,521
	Bethnal Green	4	2	12,061	617	224	898	21	532	2,292
	Whitechapel	2	1	8,193	300	159	201	269	279	1,208
	St. George-in-the-East	2	1	8,184	28	1,568	103	35	2,066	3,800
	Stepney	2	4	4,341	855	172	107	704	306	2,144
	Mile End Old Town	3	—	7,767	437	254	431	552	587	2,261
	Poplar	6	7	11,103	582	296	291	586	744	2,499
S. District.	St. Saviour's	9	3	21,647	1,026	752	1,085	939	2,141	5,943
	St. Olave's	5	—	16,358	2,774	978	1,603	1,568	1,693	8,616
	Lambeth	9	3	15,793	977	611	804	1,004	1,849	5,245
	Wandsworth and Clapham	6	—	6,373	279	307	229	287	787	1,889
	Camberwell	4	3	7,996	1,182	343	698	779	561	3,563
	Greenwich	4	4	11,748	1,116	594	1,008	878	2,070	5,666
	Woolwich	4	—	11,264	571	695	655	572	1,788	4,281
	Lewisham	3	—	4,620	640	274	189	541	579	2,223
	Total of Metropolis	139	42	334,030	25,967	12,689	15,281	21,817	31,351	107,105
	Average per Relieving Officer	—	—	2,403·1	186·8	91·2	109·9	156·9	225·5	770·5

Note.—Out-relief is as a rule granted of

(METROPOLIS), Year ended 25th December 1881.

Out-door Relief Year.							Amount of Relief given during the Year, excluding cases of Medical Relief only.				
										Average per Week (dividing Cols. 18 and 19 by 52).	
Children under 16, except Insane.	Lunatics, Insane Persons, and Idiots.	Total.	No. included in preceding col. to whom O. D. Medical Relief only was given.	No. of Families included in cols. 10, and 11. relieved on account of Desertion.	No. of Lunatics removed during the Year to or from Asylums.	No. of Visits to Residences of Applicants or Paupers.	Money.	Kind.	Total.	Money.	Kind.
11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.
							£	£	£	£ s.	£ s.
593	2	1,512	1,199	11	113	14,958	1,049	345	1,395	20 4	6 13
2,214	3	4,329	346	42	60	16,821	2,751	1,643	4,394	52 17	31 11
582	2	2,143	870	Nil.	105	5,790	2,227	55	2,282	42 17	1 1
1,990	—	5,219	1,600	15	53	6,018	1,923	451	2,374	36 19	9 2
891	4	2,286	572	23	152	14,701	2,928	1,041	3,969	56 6	20 1
489	—	1,307	482	5	30	3,020	732	306	1,038	14 1	5 18
3,377	95	9,695	5,241	56	71	22,918	9,026	484	9,510	173 11	9 7
6,141	8	15,067	2,513	105	117	31,911	14,135	3,128	17,263	271 16	60 5
213	113	561	23	4	15	952	602	44	646	11 13	17
6,880	81	14,584	4,116	116	140	15,180	11,378	2,105	13,483	218 16	40 9
5,053	76	10,729	1,018	80	93	20,613	8,865	2,887	11,752	171 12	56 4
1,747	—	2,364	673	56	18	3,310	1,359	502	1,861	26 3	9 13
419	3	1,200	267	10	32	4,049	629	665	1,294	12 2	12 16
5,459	5	13,055	6,202	127	133	20,536	13,503	1,869	15,372	259 13	35 19
2,714	9	6,066	1,474	21	65	14,700	13,658	1,691	15,349	262 10	32 6
3,588	1	8,110	1,463	46	144	9,982	1,012	2,568	3,581	19 9	49 8
2,118	—	4,410	1,677	46	111	14,335	2,188	796	2,984	42 1	15 5
843	—	2,051	1,841	—	116	6,125	316	36	352	6 2	14
1,677	40	5,517	5,186	97	39	11,274	402	18	420	7 15	7
1,052	—	3,196	2,924	20	26	5,618	955	8	964	18 8	4
1,664	4	3,929	1,634	11	80	6,726	2,485	613	3,098	47 16	11 16
1,896	117	4,512	782	24	56	19,896	5,347	1,183	6,530	102 17	22 15
4,695	13	10,651	2,547	83	198	27,494	8,933	1,214	10,147	171 15	23 6
4,962	3	13,581	6,923	41	129	14,874	6,575	157	6,732	126 9	2 19
3,696	7	8,948	859	252	236	19,990	11,566	3,433	15,000	2 22 7	66 0
1,291	10	3,190	802	7	83	10,749	5,279	719	5,998	101 10	13 16
2,918	18	6,499	1,571	40	79	6,069	1,216	3,468	4,684	23 8	66 14
3,787	25	9,478	5,601	99	79	17,641	9,308	2,054	11,362	179 2	39 9
3,382	18	7,681	1,079	35	51	12,923	7,789	2,979	10,769	149 16	57 5
1,758	6	3,987	265	54	42	4,598	4,411	2,399	6,810	84 17	46 2
78,089	663	185,857	61,750	1,526	2,666	383,771	152,547	38,861	191,413	2,934 11	748 2
561·8	4·7	1337·1	444·2	10·9	19·1	2760·9	1,097·4	279·5	1,377	21 2	5 7

short periods rarely exceeding three months.

No. 64.—Summary of Out-door Medical Relief Return

UNION.	Number of Medical Officers.	Number of Paupers on Permanent List, December 1882.	Number of Orders received for Attendance (except Permanent List).			
			At Dispensary or at Medical Officer's Surgery.	At Patients' Homes.	Total.	Midwifery Orders, included in Col. 6.
1.	2.	3.	4.	5.	6.	7.
1. Bethnal Green	6	—	1,411	2,310	3,721	41
2. Camberwell	6	844	703	1,830	2,533	87
3. Chelsea	5	—	1,312	1,357	2,669	107
4. Fulham	5	—	1,570		1,570	67
5. St. George's	4	350	1,294	1,289	2,583	54
6. St. George-in-the-East	2	39	3,599	2,266	2,865	43
7. St. Giles	1	160	315	352	667	—
8. Greenwich	6	299	2,740	2,508	5,248	36
9. Hackney	9	899	2,448	1,769	4,217	81
10. Hampstead	2	36	374		374	7
11. Holborn	10	485	6,040	4,077	10,117	—
12. Islington	9	316	4,842	3,240	8,082	26
13. Kensington	5	130	1,415	1,515	2,930	59
14. Lambeth	9	1,502	841	2,270	3,111	15
15. Lewisham	5	346	307	1,165	1,472	45
16. London	6	1,170	1,203	637	1,840	6
17. St. Marylebone	5	691	3,000	2,077	5,077	—
18. Mile End	3	—	1,679	1,252	2,931	—
19. St. Olave's	5	—	4,835	3,480	8,315	123
20. Paddington	3	—	878	801	1,679	9
21. St. Pancras	8	1,453	3,448	3,257	6,705	44
22. Poplar	6	—	2,010	2,889	4,899	9
23. St. Saviour's	9	850	4,623	3,209	7,832	60
24. Shoreditch	6	—	1,972	2,242	4,214	7
25. Stepney	1	61	1,004	1,320	2,324	—
26. Strand	2	13	397	395	792	—
27. Wandsworth and Clapham	7	632	1,081	1,409	2,490	91
28. Westminster	2	96	177	389	566	—
29. Whitechapel	3	—	2,263	1,482	3,745	—
30. Woolwich	5	—	3,261	1,525	4,786	70
Total	154	10,372	59,098	52,312	113,354	1,081
			1,944			
Average per Medical Officer	—	67	384	340	736	7

(METROPOLIS). Year ended 25th December 1882.

REMUNERATION.					*Notes.* (*The time is that for which Orders are available.*) *If all Drugs are not provided by the Guardians, the name of those supplied is stated.*
Rate of Annual Salary at the end of the Year.	Extra Fees, except Vaccination, during the Year.	Total.	Average per Order.		
			Excluding Extra Fees.	Including Extra Fees.	
8.	9.	10.	11.	12.	13.
£	£	£	s. d.	s. d.	
720	53	773	3 10½	4 1½	*1 month.*
445	85	530	3 6	4 2	*Unlimited. For 2 districts no dispensary, and expensive medicines only are provided.*
430	130	560	3 2¾	4 2¾	*Renewed monthly. For 1 district no dispensary, and medical officer finds medicines.*
300	66	366	3 0¾	4 8	*Not exceeding 4 weeks. No dispensary. Expensive drugs only.*
550	35	585	4 3¼	4 6¾	*Generally 1 month.*
430	2	432	1 5½	1 5½	*Unlimited.*
150	—	150	4 6	4 6	*During illness.*
720	34	754	2 9	2 10½	*4 weeks.*
720	114	834	3 3¾	3 10½	*2 months.*
115	60	175	6 1¾	9 4¼	*Unlimited.*
1,050	23	1,073	2 1	2 1½	*3 months.*
930	61	991	2 3½	2 5½	*Unlimited.*
600	47	647	4 1½	4 5	*1 month.*
940	59	999	6 0½	6 5	*Unlimited. For 1 district no dispensary, and cod liver oil only is provided.*
398	94	492	5 5	6 8	*Unlimited. No dispensary. Cod liver oil and quinine only is provided.*
840	62	902	9 1½	9 9½	*Unlimited.*
810	52	862	3 2¼	3 4¾	*1 month.*
600	15	615	4 1¾	4 2¼	*28 days.*
600	193	793	1 5¼	1 10¾	*During illness,*
270	13	283	3 2½	3 4½	*Unlimited.*
920	157	1,077	2 8¾	3 2½	*1 to 7 days.*
930	92	1,022	3 9½	4 2	*1 month. For one district no dispensary.*
1,170	21	1,191	2 11¾	3 0½	*No definite period.*
600	47	647	2 10¾	3 0¾	*2 months.*
350	—	350	3 0½	3 0½	*From 1 week to 3 months.*
280	—	280	7 0¾	7 0¾	*Until relieved or cured.*
605	155	760	4 10½	6 1¼	*Not limited. For 4 districts no dispensary and no medicines are provided.*
220	—	220	7 9¼	7 9½	*During sickness.*
415	2	417	2 2½	2 2¾	*The attendance of the district medical officer is in all cases upon the order of the relieving officer.*
460	87	547	1 11	2 3¼	*Unlimited.*
17,568	1,759	19,327	—	—	
£ s. d. 114 1 7	£ s. d. 11 8 5	£ s. d. 125 10 0	3 1	3 4¾	

No. 65.—METROPOLIS.—RETURN showing the NUMBER of ADMISSIONS into each CASUAL WARD of HABITUAL VAGRANTS and the NUMBER of

	Ward.	Number of Admissions into the Casual Ward.											
		Men.			Women.			Children.			Total.		
		1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.
West.	Kensington *	7,381	6,192	6,123	2,277	1,349	1,425	572	329	300	10,680	7,870	7,848
	Fulham †	5,893	8,529	3,497	1,596	1,644	1,049	341	366	259	7,830	10,539	4,805
	Paddington	9,729	11,739	10,719	3,081	3,133	3,221	723	591	690	13,533	15,463	14,630
	St. George's	4,672	4,713	6,714	4,517	5,275	4,440	929	829	672	10,118	10,817	11,826
North.	St. Marylebone ‡	13,013	12,007	15,252	5,190	3,283	5,237	1,148	603	627	19,351	15,893	21,116
	St. Pancras §	8,474	11,499	11,141	4,150	4,406	4,512	894	760	596	13,518	16,665	16,249
	Hampstead ‖	2,184	2,285	1,975	1,310	1,431	1,651	331	304	282	3,825	4,020	3,908
	Islington	5,122	9,498	10,028	1,438	2,200	1,840	321	604	450	6,881	12,302	12,318
	Hackney	5,744	6,510	6,375	1,625	2,661	2,807	328	523	389	7,697	9,694	9,571
Central.	St. Giles ¶	12,514	7,331	6,874	5,683	2,581	2,369	1,912	549	420	20,109	10,461	9,663
	Holborn	13,167	11,095	12,945	4,472	3,154	3,199	704	542	376	18,343	14,791	16,520
	City of London	15,595	15,622	15,955	9,156	7,496	7,762	2,109	1,565	1,484	26,860	24,683	25,201
East.	Whitechapel	9,010	12,604	14,792	1,495	1,924	2,085	440	491	453	10,945	15,019	17,330
	St. George-in-the-East	8,855	13,784	13,812	1,806	1,484	2,034	524	417	358	11,185	15,685	16,204
	Mile End Old Town **	5,678	11,677	14,905	1,842	3,873	4,901	575	821	862	8,095	16,371	20,668
South.	St. Saviour's (Male Ward)	7,253	10,750	10,619	—	4	—	35	38	32	7,288	10,792	10,651
	Do. (Female Ward)	—	—	—	3,281	2,213	2,679	621	353	291	3,902	2,566	2,970
	St. Olave's	3,493	7,323	6,221	1,530	1,484	921	342	352	192	5,365	9,159	7,334
	Lambeth ††	11,296	10,077	8,075	2,777	2,371	2,769	747	482	496	14,820	12,930	11,340
	Wandsworth	7,894	14,607	14,725	1,165	2,248	2,762	247	539	694	9,306	17,394	18,181
	Camberwell	3,461	8,471	7,585	1,818	1,365	1,615	365	281	399	5,644	10,117	9,599
	Greenwich	5,065	7,743	7,649	1,841	2,571	2,314	559	773	649	7,465	11,087	10,612
	Woolwich	2,090	3,609	3,552	965	1,167	1,299	364	447	470	3,419	5,223	5,321
	Lewisham	5,191	7,938	8,093	1,536	1,623	1,990	483	518	797	7,210	10,079	10,880
	TOTAL	173,224	215,603	217,626	64,551	60,940	64,881	15,614	13,077	12,238	253,389	289,620	294,745

* "Separate Berth" Wards were opened 5th October 1878.

† "Separate Berth" Wards were opened 23rd February 1880, and "these for some months were occasionally all filled, but on a change of supervision in July 1881, and the tasks of work being strictly enforced, the number of vagrants became considerably reduced."

‡ "Separate Berth" Wards opened 4th November 1878.

during the Years 1877, 1880, and 1882; together with the NUMBER of IDENTIFICATIONS REFUSALS of ADMISSION during the Year 1882.

Average nightly.			Number identified as liable to detention (whether detained or not).	Number identified as liable to detention, but not detained.	Number of Refusals of Admission into the Wards on account of the					Ward.
					Wards being full.	Applicants having money.	Applicants refusing to be bathed, searched, &c.	Applicants being Parishioners, or intoxicated, &c.		
1877.	1880.	1882.								
29·2	21·5	21·5	1,265	..	..	2	..	..	West.	Kensington.*
21·4	28·7	13·1	158	6	..	2	..	21	West.	Fulham.†
37·0	42·2	40·0	1,153	..	607	1	..	1	West.	Paddington.
27·8	29·7	32·4	640	..	276	19	23	72	West.	St. George's.
53·1	43·4	57·8	3,986	12	26	16	4	262	North.	St. Marylebone.‡
37·0	45·5	44·5	1,410	1,410	456	2	..	31	North.	St. Pancras.§
10·4	11·0	10·7	973	..	16	..	..	..	North.	Hampstead.‖
18·8	32·1	33·7	460	..	100	8	..	..	North.	Islington.
21·0	26·4	26·2	717	..	249	1	..	2	North.	Hackney.
55·0	28·5	26·4	475	..	43	26	95	299	Central.	St. Giles.¶
50·2	40·4	45·2	998	..	114	6	..	28	Central.	Holborn.
73·5	67·4	69·0	1,038	..	104	48	..	..	Central.	City of London.
29·9	41·0	47·4	1,145	..	1,556	8	..	18	East.	Whitechapel.
30·6	42·8	44·3	1,338	..	1,230	111	..	96	East.	St. George-in-the-East.
22·1	44·7	56·6	1,530	1,469	263	7	..	19	East.	Mile End Old Town.**
19·9	29·4	29·1	317	..	459	..	..	..	South.	St. Saviour's (Male Ward)
10·6	7·0	8·1	264	..	..	..	..	25	South.	Do. (Female Ward)
14·7	25·0	20·0	444	..	5	3	..	32	South.	St. Olave's.
40·6	35·3	31·0	752	..	151	207	20	116	South.	Lambeth.††
25·5	47·5	49·8	911	..	..	..	..	..	South.	Wandsworth.
15·4	27·6	26·3	806	..	40	6	..	11	South.	Camberwell.
20·4	30·2	29·0	577	..	148	13	12	7	South.	Greenwich.
9·3	14·3	14·5	67	..	24	3	..	26	South.	Woolwich.
19·7	27·5	29·8	265	..	920	3	..	9	South.	Lewisham.
694·3	791·4	807·5	21,689	2,897	6,787	492	154	1,075		TOTAL.

§ No accommodation existed for detaining habitual vagrants; they were therefore not detained.
‖ "Separate Berth" Wards opened 6th December 1879.
¶ "Separate Berth" Wards opened 20th June 1878.
** After April 1880 no accommodation existed for detaining habitual vagrants; they were therefore not detained.
†† "Separate Berth" Wards opened 28th October 1878.

No. 66.

METROPOLIS.—RETURN showing the NUMBER of ADMISSIONS into the CASUAL WARDS during each Month of the Years 1877, 1880, and 1882.

MONTH.	NUMBER OF ADMISSIONS INTO THE CASUAL WARD.														
	Men.			Women.			Children.			Total.			Average Nightly.		
	1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.
January - -	16,215	17,249	19,969	4,711	3,558	4,896	946	736	873	* 21,872	* 21,543	25,738	695·3	691·9	830·2
February - -	14,261	14,936	16,909	4,724	3,333	3,794	970	690	738	19,955	18,959	21,441	712·7	653·7	765·7
March - -	13,684	16,095	18,980	4,228	3,995	4,803	955	897	856	18,867	20,927	24,639	615·5	677·3	794·8
April - -	14,186	18,232	20,403	5,756	5,032	5,579	1,197	1,119	928	21,139	24,383	26,910	691·6	807·8	897·0
May - - -	13,358	18,579	18,199	5,538	6,084	5,724	1,260	1,353	1,110	20,156	26,016	25,033	658·0	842·3	807·5
June - - -	13,074	19,308	18,620	5,242	5,136	5,482	1,344	1,254	1,055	19,660	25,698	25,157	660·1	859·1	838·5
July - - -	12,456	17,696	15,264	5,233	5,541	5,181	1,474	1,217	876	19,163	24,454	21,321	607·6	784·8	687·7
August - -	13,674	15,940	16,901	5,635	5,170	6,157	1,435	1,124	1,244	20,744	22,234	24,302	677·6	720·0	783·9
September - -	13,139	16,938	17,470	5,261	5,019	5,913	1,495	1,046	1,176	19,895	23,003	24,559	668·3	768·3	818·6
October - - -	16,557	21,543	20,073	7,025	7,250	6,771	1,767	1,550	1,387	25,349	30,343	28,231	805·5	973·4	910·6
November - -	15,448	19,243	17,692	5,614	5,564	5,653	1,434	1,033	1,144	22,496	25,840	24,489	755·3	863·1	816·3
December - -	17,172	19,844	17,146	5,584	5,318	4,928	1,337	1,058	851	24,093	26,220	22,925	784·6	848·7	739·5
TOTAL - -	173,224	215,603	217,626	64,551	60,940	64,881	15,614	13,077	12,238	253,389	289,620	294,745	694·3	791·4	807·5
Average Nightly of Men, Women, and Children - -	474·6	589·0	596·2	176·8	166·5	177·7	42·7	35·7	33·5	—	—	—	—	—	—

* In respect of two unions the numbers included are not for the exact period of one month, but are for four weeks, or, in the cases of January, April, July, and October, for five weeks. The averages, therefore, though correct, are not precisely equivalent to the result of the division of the numbers in the total cols. by the number of days in the month.

No. 67.

METROPOLIS.—TABLE showing the AVERAGE NIGHTLY NUMBER of ADMISSIONS to each CASUAL WARD in each Month of the Years 1877, 1880, and 1882.

	WARD.	Whether "Separate Berths" or an "Associated" Ward.	No. of Beds. 1882.	JANUARY.			FEBRUARY.			MARCH.			APRIL.		
				1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.
WEST.	KENSINGTON	S.	60	27·1	16·2	22·7	25·8	17·9	18·2	25·6	18·4	20·4	28·2	23·5	24·9
	FULHAM	S.	67	20·1	21·9	15·6	20·7	22·0	11·5	19·0	23·1	12·6	22·9	30·4	14·2
	PADDINGTON	A.	70	36·8	36·6	43·4	36·9	36·0	37·8	31·8	36·8	39·4	36·7	44·0	45·0
	ST. GEORGE'S	A.	62	26·2	22·7	29·5	28·5	20·9	23·5	20·4	23·6	27·2	26·7	29·0	33·2
NORTH.	ST. MARYLEBONE	S.	89	52·0	36·2	54·0	56·8	27·2	56·2	50·4	25·2	66·0	50·8	33·8	56·8
	ST. PANCRAS	A.	66	30·2	41·5	47·7	33·9	41·0	44·3	27·8	42·6	46·1	33·1	46·2	36·2
	HAMPSTEAD	S.	20	9·3	10·9	11·6	8·5	8·2	8·7	7·2	8·7	10·6	10·7	6·6	13·8
	ISLINGTON	A.	79	14·4	25·0	37·7	18·3	25·2	29·5	13·4	27·0	34·9	19·8	35·4	36·5
	HACKNEY	S.	42	16·4	26·2	27·4	17·4	24·1	23·7	15·4	25·0	25·2	19·6	27·0	30·2
CENTRAL.	ST. GILES	S.	76	53·0	23·3	30·2	58·1	22·1	23·9	65·9	21·7	26·2	58·3	27·0	28·5
	HOLBORN	A.	80	47·4	45·6	45·3	52·0	34·5	41·7	51·3	33·9	41·0	50·4	40·3	56·4
	CITY OF LONDON	A.	90	73·1	75·8	66·0	82·4	61·5	70·9	68·5	57·2	65·7	85·7	63·9	83·7
EAST.	WHITECHAPEL	A.	85	35·4	35·3	51·8	30·6	36·0	48·8	25·2	36·6	46·8	29·8	40·1	49·7
	ST. GEORGE-IN-THE-EAST	A.	68	32·1	44·2	40·3	34·8	36·8	40·5	32·5	34·0	44·2	27·5	50·4	41·7
	MILE END	A.	73	27·3	30·3	46·4	23·5	36·0	53·0	15·0	33·6	51·1	23·7	53·7	67·5
SOUTH.	ST. SAVIOUR'S, MALE WARD	A.	34	26·1	31·0	32·3	24·8	29·2	31·2	18·9	30·2	32·9	17·4	30·7	42·3
	DITTO FEMALE WARD	A.	30	9·8	4·8	7·7	11·3	5·2	5·8	9·4	5·8	7·3	11·8	6·7	8·5
	ST. OLAVE'S	S.	52	23·9	20·5	25·0	20·3	19·2	17·8	12·4	22·0	19·5	14·4	27·0	22·6
	LAMBETH	S.	78	40·0	28·8	33·5	41·3	28·5	29·6	27·7	28·8	30·8	39·9	35·4	35·1
	WANDSWORTH	A.	117	30·8	38·2	65·9	22·3	44·4	56·7	23·1	52·2	47·9	20·8	50·9	58·4
	CAMBERWELL	S.	63	17·9	20·4	27·5	16·3	21·3	24·6	12·1	23·1	26·7	15·0	27·8	29·6
	GREENWICH	S.	56	17·4	21·0	26·6	18·4	22·6	26·2	15·5	27·0	28·9	21·5	31·6	32·0
	WOOLWICH	S.	30	6·3	8·5	10·4	7·3	6·3	11·0	8·2	10·2	11·9	6·7	14·1	16·9
	LEWISHAM	A.	34	21·3	26·0	30·1	21·5	26·4	29·7	17·9	29·6	30·4	19·6	31·3	32·6
	THE METROPOLIS	11=S. 13=A.	1521	695·3	691·9	830·2	712·7	653·7	765·7	615·5	677·3	794·8	691·6	807·8	897·0

TABLE showing the Average Nightly Number of Admissions to each Casual Ward in each Month of the Years 1877, 1880, and 1882—*continued.*

	WARD.	MAY.			JUNE.			JULY.			AUGUST.			SEPTEMBER.		
		1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.
WEST.	KENSINGTON	27·3	24·8	23·2	34·7	28·2	24·7	24·0	20·4	17·3	25·5	18·4	21·5	30·2	19·1	23·3
	FULHAM	22·3	31·0	12·8	21·0	35·9	13·8	19·7	27·7	8·9	22·2	24·7	11·3	16·4	29·3	11·9
	PADDINGTON	37·6	45·0	41·7	35·8	45·2	40·7	32·4	43·0	33·7	36·1	39·6	40·4	32·2	41·8	40·9
	ST. GEORGE'S	29·1	32·8	36·4	24·2	38·2	37·4	25·1	30·3	30·6	29·8	29·7	38·2	26·1	24·8	36·5
NORTH.	ST. MARYLEBONE	51·5	39·8	55·5	49·5	38·1	60·7	56·2	46·0	50·0	58·5	37·8	54·7	52·3	40·5	69·1
	ST. PANCRAS	35·2	46·7	44·0	31·9	48·1	43·5	30·2	43·8	41·1	35·8	41·4	45·2	34·3	44·1	45·2
	HAMPSTEAD	12·2	10·3	11·1	11·6	12·8	13·0	9·3	10·4	8·0	10·1	8·9	9·6	10·8	10·9	10·9
	ISLINGTON	17·6	35·7	37·0	17·2	43·6	37·2	15·4	33·8	28·2	18·7	30·9	30·3	17·2	29·7	32·0
	HACKNEY	19·5	26·9	28·1	18·8	25·4	26·5	20·5	25·9	21·7	23·1	25·9	26·8	22·5	24·3	25·8
CENTRAL.	ST. GILES	57·3	29·4	24·0	66·1	32·2	26·6	46·6	29·8	22·9	40·2	24·9	25·8	49·2	30·6	27·4
	HOLBORN	47·6	48·5	43·5	54·3	34·6	48·0	43·4	41·2	47·0	45·8	34·4	33·0	53·8	33·6	46·0
	CITY OF LONDON	63·8	77·6	63·7	66·7	64·2	63·2	70·7	71·8	70·4	63·3	58·1	61·3	72·9	75·5	67·1
EAST.	WHITECHAPEL	27·1	35·7	44·9	25·2	42·1	45·4	28·5	39·6	39·1	33·7	39·2	42·8	25·8	39·5	50·0
	ST. GEORGE-IN-THE-EAST	30·7	41·8	40·0	30·7	46·2	54·8	26·0	45·9	40·3	29·1	39·7	55·0	31·2	47·4	42·4
	MILE END	15·6	40·2	46·6	18·3	48·0	64·3	21·8	44·5	42·4	19·6	41·7	62·4	21·0	44·0	53·8
SOUTH.	ST. SAVIOUR'S, MALE WARD	17·3	29·4	28·5	11·5	31·0	25·2	11·1	24·6	19·8	16·5	23·7	22·6	16·2	26·6	25·1
	DITTO FEMALE WARD	10·5	8·1	9·7	9·0	7·2	8·6	10·0	7·7	7·2	11·2	6·8	7·4	10·2	6·9	9·0
	ST. OLAVE'S	12·5	26·8	18·0	11·9	27·0	19·9	10·2	22·9	13·8	13·6	22·5	18·8	11·0	22·7	22·1
	LAMBETH	39·5	37·2	35·6	33·0	40·2	32·7	38·0	35·3	25·0	47·2	34·1	31·9	42·4	35·1	29·9
	WANDSWORTH	21·2	64·0	59·1	26·6	51·9	44·4	16·6	38·6	31·4	25·8	37·6	43·7	18·7	43·0	37·8
	CAMBERWELL	15·4	28·7	27·4	11·8	31·6	26·5	13·1	27·8	21·3	15·4	26·7	27·2	13·3	22·5	26·7
	GREENWICH	17·4	30·6	30·0	22·0	38·0	34·3	15·6	32·1	22·8	21·6	28·8	24·9	27·5	35·2	33·5
	WOOLWICH	6·8	18·9	13·6	10·4	19·1	17·2	7·7	16·3	14·4	12·6	18·3	17·7	15·6	17·3	20·9
	LEWISHAM	21·9	31·5	31·8	17·1	29·6	28·2	14·3	24·5	20·2	21·3	25·1	30·3	16·9	22·5	30·4
	THE METROPOLIS	658·0	842·3	807·5	660·1	859·1	838·5	607·6	784·8	687·7	677·6	720·0	783·9	668·3	768·3	818·6

TABLE showing the Average Nightly Number of Admissions to each Casual Ward in each Month of the Years 1877, 1880, and 1882—*continued.*

	WARD.	OCTOBER.			NOVEMBER.			DECEMBER.			AVERAGE FOR THE YEAR.		
		1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.	1877.	1880.	1882.
WEST.	KENSINGTON	33·4	26·5	25·4	54·3	22·3	21·6	34·5	21·8	14·2	29·2	21·5	21·5
	FULHAM	26·4	33·1	18·1	22·9	33·1	14·8	23·1	32·8	11·9	21·4	28·7	13·1
	PADDINGTON	45·9	49·5	43·2	42·3	44·1	39·7	40·0	44·7	34·4	37·0	42·2	40·0
	ST. GEORGE'S	37·8	41·3	39·5	31·5	30·9	29·3	26·5	30·6	25·4	27·8	29·7	32·4
NORTH.	ST. MARYLEBONE	56·2	73·8	54·4	52·0	53·6	51·7	50·9	67·0	64·6	53·1	43·4	57·8
	ST. PANCRAS	53·8	52·3	48·4	48·2	49·6	47·5	49·1	48·6	44·3	37·0	45·5	44·5
	HAMPSTEAD	12·9	15·3	11·7	10·6	14·9	10·5	12·0	13·2	8·5	10·4	11·0	10·7
	ISLINGTON	27·7	41·7	39·4	23·5	36·2	34·5	22·6	38·5	26·9	18·8	32·1	33·7
	HACKNEY	28·8	30·8	28·4	24·8	28·0	26·4	25·4	27·9	23·7	21·0	26·4	26·2
CENTRAL.	ST. GILES	48·1	37·7	31·6	52·6	31·8	26·8	65·7	31·8	23·3	55·0	28·5	26·4
	HOLBORN	51·7	59·2	48·4	48·0	38·6	43·1	57·3	38·9	49·2	50·2	40·4	45·2
	CITY OF LONDON	73·7	68·8	68·4	74·6	67·7	86·2	88·1	66·4	62·2	73·5	67·4	69·0
EAST.	WHITECHAPEL	37·4	51·1	54·9	31·8	47·1	51·1	28·6	49·4	44·3	29·9	41·0	47·4
	ST. GEORGE-IN-THE-EAST	30·2	46·1	42·9	30·6	40·6	43·3	32·1	40·4	37·5	30·6	42·8	44·3
	MILE END	24·5	56·2	77·6	25·5	59·0	58·7	30·0	49·2	55·4	22·1	44·7	56·6
SOUTH.	ST. SAVIOUR'S, MALE WARD	25·9	32·9	35·0	25·5	32·1	26·4	28·1	32·1	28·1	19·9	29·4	29·1
	DITTO FEMALE WARD	12·1	10·0	9·3	10·8	7·5	9·5	11·7	6·7	7·0	10·6	7·0	8·1
	ST. OLAVE'S	16·5	31·3	24·0	13·5	26·4	21·4	16·0	30·8	17·8	14·7	25·0	20·0
	LAMBETH	51·6	44·2	38·1	44·1	37·8	29·4	42·2	38·0	21·3	40·6	35·3	31·0
	WANDSWORTH	29·9	50·2	59·4	37·7	56·6	42·7	31·6	42·4	50·0	25·5	47·5	49·8
	CAMBERWELL	22·4	37·1	30·5	15·9	32·4	27·0	16·3	31·6	20·1	15·4	27·6	26·3
	GREENWICH	24·6	34·0	30·6	22·8	35·3	30·7	21·0	26·8	28·0	20·4	30·2	29·0
	WOOLWICH	10·2	19·1	17·9	9·3	11·0	11·2	10·9	11·4	11·2	9·3	14·3	14·5
	LEWISHAM	23·0	30·2	33·0	21·8	26·1	31·8	20·1	26·5	28·9	19·7	27·5	29·8
	THE METROPOLIS	805·5	973·4	910·6	755·3	863·1	816·3	784·6	848·7	739·5	694·3	791·4	807·5

No. 68.

METROPOLIS.—TABLE showing the Number of CASUAL PAUPERS UNDER DETENTION as Habitual Vagrants who were PROSECUTED BY THE GUARDIANS for various Offences and sentenced to Imprisonment by Police Magistrates during the 10 Years 1873–1882.

Year.	For Refusing to Work.	For Neglecting Work.	For Destroying their Clothes.	For Wilful Damage.	For giving False Name or Statement.	For Absconding.	For Assaults.	For Stealing.	TOTAL.
1873	47	32	36	2	12	10	2	—	141
1874	18	25	72	—	5	1	4	—	125
1875	30	28	49	—	8	5	5	—	125
1876	38	12	44	2	4	9	1	—	110
1877	24	5	44	—	—	3	—	—	76
1878	27	9	24	3	1	5	—	—	69
1879	29	12	16	—	—	3	1	1	62
1880	23	8	13	—	—	6	—	2	52
1881	16	2	4	3	3	—	—	—	28
1882	23	2	9	3	9	1	2	—	49
TOTAL -	275	135	311	13	42	43	15	3	837

No. 69.—RETURN of the AVERAGE PRICES PAID, during the Year ended LADY-DAY 1882, for various Articles used in the METROPOLITAN WORKHOUSES.

UNION or PARISH to which the Workhouse belongs.	Situation of Workhouse.	Flour. Per sack.	Bread. Per cwt.	Beef. Per stone of 14 lbs.	Mutton. Per stone of 14 lbs.	Legs of Beef. Per stone of 14 lbs.	Bacon. Per cwt.	Milk. Per gallon of 8 pints.	Eggs. Per 120.	Butter, Butterine, &c. Per cwt.	Lard. Per cwt.
Bethnal Green	Bethnal Green	*s. d.* 38 0	*s. d.* –	*s. d.* 8 2	*s. d.* 11 1	*s. d.* **8 2**	*s. d.* 74 8	*s. d.* 8½	*s. d.* 9 7½	*s. d.* 112 6	*s. d.* *63 3*
Camberwell Do. Chelsea Do.	Havil Street Gordon Road Arthur Street	34 8 *34 0* 14 0	11 8 14 0	8 1 7 10½ 7 7 *6 5*	8 1 *7 0*	– 4 4½	73 10 78 0	9½ 10	9 1½ 9 7	96 9 158 8 144 8 111 0	58 4 –
Fulham	nr. Hammersmith	37 2	**16 4**	6 10½	9 2½	4 2½	82 0	new 10½ skim 7	9 6	158 8 94 0	–
St. George's Do.	Fulham Road Mount Street	36 4½ 36 4½	14 0 14 0	7 11½ 7 11½	9 0½ 9 0½	4 11½ 4 11½	70 0 70 0	10½ 10¼	8 10½ 8 10½	108 0 108 0	58 4 –
St. George in-the-East	Old Gravel Lane	35 6	12 1	8 0	8 0	–	93 4	10½	**11 0**	152 8 108 8	–
St. Giles-in-the-Fields and St. George, Bloomsbury.	Endell Street	37 0	12 10	7 11½	7 11½	3 11½	84 0 *56 3*	9½	10 0	140 0 *72 6*	60 0
Greenwich	Greenwich	36 9	11 8	8 8	8 8	4 3½	72 0	10	9 7	103 0	56 0
Hackney Hampstead Holborn Do. Islington	Homerton New End Gray's Inn Road City Road St. John's Road	36 3 37 6 34 10½ 34 10½ 35 11	12 10 14 6 14 0 14 0 12 0½	8 4 8 5½ 7 9 7 7½ 9 5 6 7½	8 4 8 9 9 0 7 7½ 9 5	– *2 11* 3 6 3 4 4 10	83 0 79 4 79 6 84 6 79 6	10½ **1 2** 9½ 9½ 10	9 6 9 9 10 0 10 0½ 9 0	86 0 140 0 120 0 124 6 104 6	– 71 2 – – –
Kensington Lambeth Do. Lewisham	Wright's Lane Renfrew Road Prince's Road Lewisham	35 4½ 36 1 **40 0**	13 0½ 10 6 14 0	8 8 8 3½ 8 9	11 7 9 2½ 11 8	4 4½ 5 3 5 3	61 0 79 4 79 4	10 10 1 0	9 5 9 9 10 0	87 6 83 6 **172 8** 112 0	67 8 93 4 56 0
City of London Do. St. Marylebone	Homerton Holloway Marylebone Road	37 6 34 7	11 8 11 11½	7 11½ 8 3½	7 11½ 8 3½	7 11½ 4 4½	73 6 80 6	10 9½	*8* 7½ 9 3	105 6 103 0	58 4 *63 8*
Mile End Old Town (Hamlet).	Bancroft Road	35 10	*9 4*	7 1	8 4	3 7	100 4	10	9 5	111 0	58 4
St. Olave's Do. Do. Paddington	Parish Street Bermondsey Rotherhithe Harrow Road	36 6½ 36 0	14 0 12 5½	7 11 8 2	11 1 9 1½	3 9½ 4 4½	78 0 71 0	9½ 10	9 2 10 0	109 0 113 0	54 0 –
St. Pancras Poplar	Kings Road Poplar	*34 0* 35 0	11 8 12 3	8 9 8 4	9 2½ 8 4	4 1 3 6	69 0 **102 8**	9½ 10½	9 6 9 7	108 0 164 4 112 0	54 0 –
St. Saviour's Do. Shoreditch	Marlboro' Street Mint Street Kingsland Road	36 0 35 0	12 10 12 10	8 0½ 7 11½	8 3½ **12 1** 9 6½ 9 2½	3 10½ 3 10	78 6 81 8	9 9½	10 0 9 8½	103 0 107 9	– 66 8
Stepney	Bromley	36 3 35 0	10 10½	8 2	10 9½	3 6	–	10	9 2	108 0	58 4
Strand	Edmonton	37 0	own make.	8 0	10 2	4 1	70 0	1 0	9 7½	111 0	–
Wandsworth and Clapham.	St. John's Hill	35 0	14 0	8 9	11 5 7 4	4 1	76 0	10½	9 8	114 0	–
Westminster	Poland Street	37 9	13 0	**10 2½**	10 2½	4 4½	98 0 65 4	10	10 0	153 8 90 6	–
Whitechapel	Mile End Road	37 9	12 7½	7 10½	–	–	93 4	10½	9 0	108 0 106 0	–
Woolwich	Plumstead	34 1½ 36 1½	12 10	8 1½	9 0½	–	80 0	11	9 2	117 6	57 0
Highest price (printed above in BOLD type)		40 0	16 4	10 2½	12 1	8 2	102 8	1 2	11 0	172 8	93 4
Lowest price (printed above in *italics*)		34 0	9 4	6 5	7 0	2 11	56 3	7	8 7½	72 6	53 8

RETURN of the Average Prices Paid, during the Year ended Lady-day 1882, for various Articles used in the Metropolitan Workhouses—*continued.*

UNION or PARISH to which the Workhouse belongs.	Cheese.	Tea.	Coffee.	Cocoa.	Sugar.		Molasses.	Currants.	Raisins.	Pepper.	Mustard.	Salt.
					Moist.	Loaf.						
	Per cwt.	Per lb. (including duty).	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per lb.	Per lb.	Per ton.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*d.*	*s. d.*	*s. d.*
Bethnal Green	63 6	1 10 1 4	130 8	65 4	24 4	33 6	–	32 8	38 6	5	8	32 2
Camberwell	72 4	1 6	112 6	51 0	24 7½	31 3	–	46 8	46 8	5½	8½	44 7
Chelsea	67 0	1 10 1 7½ 1 3½	112 0	–	22 6	32 8	14 0	28 0	28 0	7	8	40 0
Fulham	79 4	1 0	112 0	–	28 6	32 8	–	46 8	46 8	4½	9	30 0
St. George's, Fulham Road	65 0	1 3	154 0	46 8	26 1½	32 8	*8 10½*	37 4	39 8	7	11½	45 0
Do. Mount Street	65 0	1 3	154 0	–	26 1½	32 8	–	37 4	39 8	7	11½	45 0
St. George-in-the-East	78 4 59 4	2 4 1 3½	140 0	102 8	25 8	31 11	18 8	37 4	42 0	6½	9	32 9
St. Giles-in-the-Fields and St. George, Bloomsbury.	84 0 55 0	1 8 1 2½	168 0	–	21 0	32 8	14 0	37 4	46 8	6	6	35 0
Greenwich	56 0	1 9	119 0	46 8	22 6	29 10½	11 0	–	–	4	6	35 0
Hackney	84 0	1 6	130 8	85 0	22 9	35 0	–	48 0	48 0	6	10	31 8
Hampstead	75 10	2 0	140 0	112 0	30 0	30 0	18 8	46 8	46 8	5	10	40 0
Holborn, Gray's Inn	65 4	*1 2½*	*105 0*	–	22 10½	32 8	–	28 0	34 6	6	5½	38 4
Do. City Road	70 0	1 3½	107 4	50 2	22 7½	32 8	–	28 0	34 0	5½	6	42 0
Islington	60 8	1 5½	112 0	46 0	21 11½	32 4	11 8½	33 2	40 8	5	7	33 4
Kensington	–	1 6	–	–	23 3	29 6	11 0	28 0	37 4	5½	9	33 4
Lambeth	56 0	1 5	–	–	22 0	–	–	30 4	37 4	5½	5½	35 0
Lewisham	93 4 64 0	1 6	116 8	–	25 3	31 6	–	46 8	46 8	5½	1 4	32 6
City of London	60 8	*1 2½*	112 0	65 4	25 7½	30 6	11 8	32 8	35 0	5½	7½	52 6
St. Marylebone	59 0	1 7	–	54 0	23 10½	32 8	11 9	32 8	37 4	9½	7½	38 0
Mile End Old Town (Hamlet).	57 3	1 5	126 0	–	22 4½	32 0	16 0 12 4	35 0	37 4	8	5½	30 0
St. Olave's	*46 8½*	1 5½	140 0	*89 8*	28 9	35 0	12 0	36 2	36 2	4	1 0	33 4
Paddington	70 0 61 0	1 6	121 4	–	21 6	31 6	14 0	28 6	35 0	5½	9	26 8
St. Pancras	78 0	1 6	140 0	108 0	27 6	30 6	–	*26 0*	32 0	7	11	35 0
Poplar	84 0	2 0 1 5½	121 4	–	23 6	32 8	14 0	32 8	32 8	4½ 4	7	30 0
St. Saviour's	50 0	1 3½	121 4	–	23 3	30 4	–	32 8	39 8	5½	9	31 8
Shoreditch	73 6	1 9	142 10	112 0	25 10½	32 9	–	29 6	33 3	6	6½	*25 10*
Stepney	75 0	1 3½	–	–	30 0 27 9	32 0	–	38 0	45 0	6½	1 0½	30 0
Strand	84 0	1 6	140 0	62 0	22 6	33 0	14 6	31 0	36 0	4	10	35 0
Wandsworth and Clapham	61 0	1 6	112 0	–	24 0	32 8	–	32 8	32 8	8	10	28 4
Westminster	92 6	1 3 2 0	121 4	60 8	*20 6*	30 4	16 4	32 8	37 4	8 6	1 3	43 2
Whitechapel	77 0	2 4 1 10	116 8	–	23 6	32 8	–	34 0	42 0	7	7	30 0
Woolwich	74 0 64 0	1 9	149 4	–	27 3	*28 3*	9 6	–	–	7½	11½	37 1
Highest price (printed above in BOLD type).	93 4	2 4	168 0	112 0	30 0	35 0	18 8	48 0	48 0	9½	1 4	52 6
Lowest price (printed above in *italics*).	46 8½	1 2½	105 0	39 8	20 6	28 3	8 10½	26 0	28 0	4	5½	25 10

RETURN of the Average Prices Paid, during the Year ended Lady-day 1882, for various Articles used in the Metropolitan Workhouses—*continued.*

UNION or PARISH to which the Workhouse belongs.	Vinegar. Per gallon.	Rice. Per cwt.	Arrowroot. Per cwt.	Sago. Per cwt.	Oatmeal. Per cwt.	Pearl Barley. Per cwt.	Split Peas. Per bushel.	Potatoes. Per ton.	Wine. Per gallon.	Gin. Per gallon.	Brandy. Per gallon.	Ale. Per barrel of 36 gallons.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Bethnal Green	1 2½	12 0	39 8	25 8	15 6	15 2	6 9	77 6	10 0	10 10	18 10	30 9
Camberwell	2 0	12 6	42 10	**28 0**	14 3	*12 0*	6 4½	82 6	12 0	11 0	20 0	36 0
Chelsea	1 0	12 6	37 4	18 8	15 0	18 9	6 9	97 6	6 6	11 0	17 6	57 0 34 0
Fulham	1 9	12 0	42 0	18 8	12 6	18 8	6 6	95 0	9 6½	10 11	21 1½	36 0
St. George's, Fulham Road	1 2	11 4½	102 8	14 0	14 6	13 0	7 0	92 6	–	–	–	42 3
Do. Mount Street	1 2	11 4½	102 8	–	14 6	13 0	7 0	92 6	–	–	–	42 3
St. George-in-the-East	1 0	12 11	**112 0**	–	14 8	–	–	90 0	8 6	10 9	*18 7*	29 10
St. Giles-in-the-Fields and St. George, Bloomsbury.	2 6	11 6	65 4	–	13 3	13 9	5 6	105 0	13 3	14 0	**28 6**	41 0
Greenwich	1 0	10 7½	37 4	–	14 7½	14 4½	6 4½	92 6	11 1½	–	20 0	30 8
Hackney	2 7½	12 6	74 8	23 4	13 3	12 9	6 3	87 6	–	–	22 0	48 0
Hampstead	1 6	15 0	65 4	23 4	10 6	12 6	6 3	100 0	**14 11**	12 0	26 0	34 3
Holborn, Gray's Inn	10½	*10 6*	37 4	18 8	14 4½	14 7½	5 2	105 0	10 0	11 3	18 6	–
Do. City Road	9½	11 0	*30 4*	–	13 7½	–	6 5½	105 0	10 0	11 3	18 6	28 6
Islington	8	10 10½	40 8	–	13 7½	–	6 6	90 0	7 9	11 6	21 11½	54 0
Kensington	1 3	12 9	42 0	13 0	14 3	12 6	6 9	100 0	9 6	–	18 0	34 0
Lambeth	2 4	14 0	37 4	16 4	16 0	35 0	6 10½	95 0	5 6	10 6	16 1½	30 6
Lewisham	1 0	12 1½	51 4	–	16 3	–	6 9	**126 5**	13 6	14 0	25 0	**60 0**
City of London	1 6	13 1½	51 4	18 8	13 3	15 0	8 7½	95 0	11 0	12 6	23 0	38 0
St. Marylebone	1 6	12 7½	42 0	–	14 0	–	6 4½	85 0	6 2	*10 6*	17 6	30 6
Mile End Old Town (Hamlet).	9	12 4	70 0	23 4	16 4½	22 2	6 9¾	96 3	8 6	10 7	15 6	30 6
St. Olave's	9	12 0	93 4	–	13 9	**37 4**	*4 3*	95 0	11 6	12 0	23 0	48 0
Paddington	8½	11 0	74 8	14 0	*17 3*	18 8	6 7½	87 6	7 0½	10 8	18 6	28 6
St. Pancras	1 8½	12 3	32 0	*10 6*	15 6	14 6	6 3	90 0	*5 2½*	11 6	20 0	–
Poplar	7½	11 9	37 4	–	13 3	–	6 6	85 0	10 0	**14 6**	21 0	32 6
St. Saviour's	1 6	12 3	44 4	–	13 4½	12 9	8 0	82 6	10 0	12 0	16 0	52 0
Shoreditch	11	**22 9**	70 0	18 8	15 6½	15 3	6 3½	*81 3*	8 2½	10 7	18 3	30 6
Stepney	1 3	14 0	93 4	–	16 6	–	6 9	91 8	8 6	–	19 6	34 4
Strand	1 0	13 0	36 0	–	15 7½	17 3	7 6	105 0	9 0	11 1½	20 6	–
Wandsworth and Clapham	1 3	14 0	–	23 4	16 6	15 6	–	120 0	10 6	12 0	18 0	31 3
Westminster	2 2½	15 6	49 0	–	**18 9**	20 0	**9 6**	117 6	12 0	13 6	20 0	36 0
Whitechapel	10½	12 6	–	–	14 7½	–	6 6½	82 6	–	–	–	–
Woolwich	–	11 5	–	–	*11 0*	13 6	5 6	95 0	–	–	–	*28 0*
Highest price (printed above in BOLD type).	2 7½	22 9	112 0	28 0	18 9	37 4	9 6	126 5	14 11	14 6	28 5	60 0
Lowest price (printed above in *italics*).	7½	10 6	30 4	10 6	11 0	12 0	4 3	81 3	5 2½	10 6	13 7	28 0

RETURN of the Average Prices Paid, during the Year ended Lady-day 1882, for various Articles used in the Metropolitan Workhouses—*continued.*

UNION or PARISH to which the Workhouse belongs.	Porter.	Coals.		Coke.	Gas.	Soap.	Soda.	Starch.	Candles.	Cost of each Funeral, including cost of Coffin and all Fees.	
		House.	Gas or Steam.								
	Per barrel of 36 gallons.	Per ton.	Per ton.	Per chaldron.	Per 1,000 feet.	Per cwt.	Per cwt.	Per cwt.	Per 12 lbs.	Adult.	Child.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Bethnal Green	28 6	13 6	16 10½	11 0	3 2	27 0 25 3 16 4½	4 7½	19 6	2 0	*12 6*	7 9 3 0 stillborn
Camberwell	*17 6*	16 6	16 6	11 0	*2 10*	22 0 18 9	4 9¾	22 2	2 8½	30 6	20 0
Chelsea	31 [illegible]	16 10½	–	10 6	3 0	21 2½	3 4½	37 4	5 3	29 0	21 0
Fulham	26 6	15 0	14 6	8 1	3 0	34 0 26 0	4 9	*17 0*	4 9	22 6	12 6
St. George's, Fulham Road	–	17 6	17 7½	9 10½	3 0	25 6	5 1½	30 4	3 6	35 3	27 9
Do. Mount Street	–	17 6	17 7½	–	3 0	25 6	5 1½	30 4	3 6	35 3 about	27 9 about
St. George-in-the-East	26 8	16 11½	14 3	10 7½	3 0	27 6	4 8	23 10	4 4	26 8	13 8
St. Giles-in-the-Fields and St. George, Bloomsbury.	28 0	14 0	16 9	9 0 per ton	3 0	24 10½	3 9	28 0	5 6 3 9	27 6	22 6
Greenwich	28 0	17 0	17 0	19 0	*2 10*	23 6	3 9	25 8	4 0	No contract for In-door Poor.	
Hackney	30 9	18 0	–	10 7½	3 2	26 3	4 3	28 0	4 6	29 6	19 0
Hampstead	31 6	20 0	–	13 0	3 2	28 0	5 0	32 8	5 0	46 6	30 0
Holborn, Gray's Inn	27 6	17 4½	17 4½	*7 9*	3 0	26 0	4 1½	39 8	–	20 6	–
Do. City Road	27 6	15 9	15 9	*7 9*	3 2	26 6	4 1½	39 8	3 5½	14 6	[illegible] 6
Islington	29 8½	14 8½	13 10½	12 2	3 2	18 9	3 6	24 0	4 3	26 9	18 3
Kensington	28 0	16 7	15 11	9 9	3 2	24 0	4 0	32 8	4 4	28 0	15 0
Lambeth	28 0	17 10	18 10	11 4	3 0	25 2	3 7½	28 0	4 10½	23 6	20 0
Lewisham	33 0	19 6	–	12 8	*2 10*	25 0	5 0	28 0	7 0	35 8	29 2
City of London	28 6	14 0	13 6	7 11	3 1	24 5½	[illegible] 6	30 4	3 0	31 0	19 6
St. Marylebone	28 6	*13 0*	18 6	7 10	3 2	35 0 23 9 *14 0*	5 3	42 0	2 10½	18 0 No fees payable.	*7 6*
Mile End Old Town (Hamlet).	28 0	15 7½	*13 0*½	11 0	3 0	20 6	4 6	23 4	8* 5*	27 6	19 6 4 6 stillborn
St. Olave's	28 0	15 9	17 6	12 0	*2 10*	19 6	3 10	28 0	6 0	29 6	19 0
Paddington	26 9	16 10	16 9	9 3	3 2	24 0	3 11½	28 0	7 6	22 3	16 1
St. Pancras	21 8	14 10	–	10 8	3 2	23 6	4 3	32 8	3 6	14 9	9 3
Poplar	38 6	18 0	15 0	9 0	3 0	26 0 24 0	3 9	23 4	3 0	38 0	21 0
St. Saviour's	33 0	17 4½	16 10½	10 9	*2 10*	23 0	5 9	28 0	3 0	21 0	15 0
Shoreditch	28 3	18 3½	15 9	10 0	3 2	25 4½	3 3½	25 6	3 4½	25 0	15 0
Stepney	–	18 3	13 9	11 1½	3 0	22 9	4 3	32 8	1 6	44 3	No children
Strand	28 0	17 3	16 6	9 0	3 9½	29 0	5 0	51 4	6 0	25 0	17 2
Wandsworth and Clapham	–	18 9	19 0	10 6	*2 10*	24 0	3 7	23 4	3 3	32 6	25 0
Westminster	27 0	15 9	17 3	*7 9*	3 2	25 6	5 3	32 8	6 3	25 0	17 2
Whitechapel	30 9	17 6	14 6	11 6	3 0	28 0	*3 3*	37 4	3 6	–	–
Woolwich	–	18 5	16 5	11 0	3 2½	24 10½	3 7½	39 8	–	–	–
Highest price (printed above in BOLD type).	38 6	20 0	19 0	13 0	3 9½	35 0	5 9	51 4	7 6	46 6	30 0
Lowest price (printed above in *italics*).	17 6	13 0	13 0½	7 9	2 10	14 0	3 3	17 0	5	12 6	7 6

* Reference to the Contract shows that these sums are correctly entered.

No. 70.—RETURN of the AVERAGE PRICES PAID, during the Year ended LADY-DAY 1882, for various Articles used in the METROPOLITAN INFIRMARIES, ASYLUMS, and HOSPITALS.

UNION, PARISH, or DISTRICT to which the INFIRMARY, ASYLUM, or HOSPITAL belongs.	Situation of Infirmary, Asylum, or Hospital.	Flour. Per sack.	Bread. Per cwt.	Beef. Per stone of 14 lbs.	Mutton. Per stone of 14 lbs.	Legs of Beef. Per stone of 14 lbs.	Bacon. Per cwt.	Milk. Per gallon of 8 pints.	Eggs. Per 120.	Butter, Butterine, &c. Per cwt.	Lard. Per cwt.
		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Camberwell	Havil Street	34 8	11 8	8 1	8 1	–	73 10	9½	9 1½	96 9	58 4
Chelsea	Cale Street	35 0	14 0	8 3½ 7 10½ 7 5½	7 5½	4 4½	78 0	10	9 7	144 8 111 0	84 0
St. George-in-the-East	Old Gravel Lane	35 6	12 1	8 0	8 0	–	93 4	10½	11 0	152 8 108 8	–
St. George's	Fulham Road	36 4½	14 0	7 11½	11 1½	–	*72 0*	10½	8 10½	108 0	58 4
Greenwich	Greenwich	36 9	11 8	8 8	8 8	4 3½	*72 0*	10	9 7	103 0	56 0
Hackney	Homerton	36 3	12 10	8 4	8 4	8 4	83 0	9½	9 6	128 0	–
Holborn	Upper Holloway	40 0	13 9	7 8	10 11	–	85 0	10½	11 9	134 8	–
Islington	St. John's Road	35 11	12 0½	9 5 6 7½	9 5	4 10	79 6	10	9 0	104 6	–
Kensington	Wright's Lane	35 4½	13 0½	8 8	11 7	4 4½	81 8	10	9 6	111 0	67 8
Lambeth	Kennington	36 1	*10 6*	8 3½	9 2½	5 3	–	10	9 9	*83 6*	93 4
City of London	Bow Road	37 6	11 8	7 11½	7 11½	7 11½	73 6	10	8 7½	105 6	58 4
St. Marylebone	Notting Hill	30 2	12 11	8 9	8 9	4 8	79 0	9½	10 6	158 8 120 0	–
St. Olave's	Rotherhithe	36 6½	14 0	7 11	11 1	3 9½	78 0	9½	9 2	109 0	*54 0*
St. Saviour's	Walworth	36 0	12 10	8 0½	8 3½	3 10½	78 6	*9*	10 0	103 0	–
Shoreditch	Kingsland Road	35 0	12 10	7 11½	12 1 9 6½ 9 2½	3 10	81 8	9½	9 8½	107 9	66 8
Wandsworth and Clapham.	St. John's Hill	35 0	14 0	8 9	11 8 7 4	4 1	76 0	10½	9 8	114 0	–
Whitechapel	Baker's Row	37 9	13 7½	7 10½	8 10	4 6	93 4	10½	9 0	168 0 106 0	78 0
Woolwich	Woolwich	36 0	12 10	8 2	10 10 9 4	–	80 0	11	9 2	140 0 117 6	57 0
Central London Sick Asylum District.	Highgate	36 0	14 0	8 2	11 1	9 4	105 0	9½	10 0	113 0	58 0
Do.	Cleveland Street	36 0	14 0	8 2	11 1	9 4	105 0	9½	9 6	113 0	58 0
Poplar and Stepney Sick Asylum Dist.	Bromley	38 3	13 5	8 0	12 2 8 0	8 0	112 0	10	10 10	182 0 114 6	–
Metropolitan Asylum District: Imbecile Asylum	Leavesden	34 6	10 6½	9 0 8 8½	9 4	*8 9*	130 8 82 6	1 0	10 0 9 6 9 4½	158 0 106 6 106 0	–
Do.	Caterham	*84 0*	11 0	7 10	8 5	5 6	80 0	1 0	*8 6*	120 0	72 0
Do. for Adults Do. for Children	Darenth Do.	45 0	12 10	9 3 9 1	9 4	6 7	80 0 74 0	1 0	12 0 10 9	148 0 115 0	112 0
Fever Hospital	Stockwell	39 3	14 5	9 11	10 2½	9 0½	82 6	10½	11 0	127 0	–
Do. Small-pox Hospital	Homerton Do.	42 0	15 0	11 4½	11 1	8 2	82 0	10½	10 4	128 0	56 0
Do.	Stockwell	39 3	14 5	9 11	10 2½	7 0	82 6	10½	11 0	127 0	–
Do.	Fulham	42 6	14 7	8 9½	10 7	7 2½	79 6	10½	9 4½	125 6	58 4
Do.	Deptford	38 10	14 4	9 11	10 2	8 6	83 0	9½	10 4	126 1	58 4
Do.	Hampstead	Closed.									
Highest price (printed above in **bold** type)		45 0	15 0	11 4½	12 2	9 4	130 8	1 0	12 0	182 0	112 0
Lowest price (printed above in *italics*)		34 0	10 6	6 7½	7 4	3 9	72 0	9	8 6	83 6	54 0

RETURN of the Average Prices paid, during the Year ended Lady-day 1882, for various Articles used in the Metropolitan Infirmaries, Asylums, and Hospitals—*continued.*

UNION, PARISH, or DISTRICT to which the INFIRMARY, ASYLUM, or HOSPITAL belongs.	Cheese.	Tea.	Coffee.	Cocoa.	Sugar.		Molasses.	Currants.	Raisins.	Pepper.	Mustard.	Salt.
					Moist.	Loaf.						
	Per cwt.	Per lb. (including duty).	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per lb.	Per lb.	Per ton.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
Camberwell	72 4	1 6	112 6	51 0	24 7½	31 3	–	46 8	40 8	5½	8½	44 7
Chelsea	74 8	1 10	112 0	–	22 6	32 8	–	28 0	*28 0*	7	8	40 0
	67 0	1 7½										
		1 3½										
St. George-in-the-East	78 4	**2 4**	140 0	102 8	25 8	31 11	**18 8**	37 4	42 0	6½	9	32 9
	59 4	1 3½										
St. George's	65 0	1 3	**154 0**	46 8	26 1½	32 8	*8 10½*	37 4	39 8	7	11½	45 0
Greenwich	56 0	1 9	119 0	46 8	22 6	29 10½	11 0	–	–	4	6	35 0
Hackney	**84 0**	1 6	130 8	–	22 9	**35 0**	–	**48 0**	**48 0**	6	10	31 8
Holborn	**84 0**	1 3½	107 4	–	**29 9**	32 8	–	28 0	34 0	6½	5½	38 4
Islington	60 8	1 5½	112 0	46 0	*21 11½*	32 4	11 8½	33 2	40 8	5	7	33 4
Kensington	77 0	1 6	*93 4*	–	23 3	29 6	–	28 0	37 4	5½	9	33 4
Lambeth	50 0	1 5	–	–	–	30 1½	–	30 4	37 4	5½	6½	35 0
City of London	60 8	*1 2½*	112 0	65 4	25 7½	30 6	11 8	32 8	35 0	5½	7½	**52 6**
St. Marylebone	74 8	2 0	**154 0**	54 0	24 9	32 8	–	32 8	37 4	9½	6½	38 0
		1 7										
St. Olave's	*46 8½*	1 5½	140 0	*39 8*	28 9	**35 0**	12 0	36 2	36 2	4	1 0	33 4
St. Saviour's	50 0	1 3½	121 4	–	*25 3*	30 4	–	32 8	39 8	5½	9	31 8
Shoreditch	73 6	1 9	142 10	112 0	25 10½	32 9	–	29 6	33 3	6	6½	25 10
Wandsworth and Clapham	61 0	1 6	112 0	–	24 0	32 8	–	32 8	32 8	8	10	28 4
Whitechapel	65 4	**2 4**	116 8	**149 4**	23 6	32 8	–	34 0	42 0	7	7	30 0
		1 10										
Woolwich	74 0	1 9	149 4	–	27 3	28 3	9 6	–	–	7¾	11½	37 1
Central London Sick Asylum District, Highgate.	69 0	1 6½	121 4	112 0	*20 9*	30 0	–	*27 0*	33 0	6	10¾	41 8
Ditto, Cleveland St.	69 0	1 6½	121 4	112 0	*20 9*	30 0	–	*27 0*	33 0	6	10¾	41 8
Poplar and Stepney Sick Asylum District.	80 0	1 5½	140 0	135 4	23 0	31 6	–	38 6	39 0	8½	**1 2**	*25 0*
Metropolitan Asylum District:												
Imbecile Asylums. Leavesden	58 0	1 11	140 0	91 4	25 3	32 3	12 1½	33 0	39 6	6½	6¼	41 6
	55 0	1 4½										
Imbecile Asylums. Caterham	60 0	1 5	135 0	85 0	23 6	34 0	12 0	29 6	42 6	7	9	32 0
Imbecile Asylums. Darenth	60 0	1 10	140 0	95 0	28 0	32 6	–	42 0	42 0	**1 0**	8	35 0
		1 4½				30 0				8		
Hospitals. Small-pox. Fever. Stockwell	70 0	1 10	116 8	–	29 3	31 6	–	29 9	39 6	5	11¾	40 0
		1 4										
Hospitals. Small-pox. Fever. Homerton	77 0	1 6	121 4	–	26 0	31 0	–	32 0	33 0	6	8	43 4
Hospitals. Small-pox. Homerton												
Hospitals. Small-pox. Stockwell	70 0	1 4	116 8	–	23 3	31 6	–	29 9	39 6	5	11¾	40 0
Hospitals. Small-pox. Fulham	62 6	1 4½	121 4	–	29 1½	31 6	–	28 0	30 0	6	1 1¼	42 6
Hospitals. Small-pox. Deptford	77 0	1 6	121 4	80 0	26 0	*26 0*	–	32 0	33 6	6	8	43 4
Highest price (printed above in **bold** type).	84 0	2 4	154 0	149 4	29 9	35 0	18 8	48 0	48 0	1 0	1 2	52 6
Lowest price (printed above in *italics*).	46 8½	1 2¼	93 4	39 8	20 9	26 0	8 10½	27 0	28 0	4	5½	25 0

RETURN of the Average Prices paid, during the Year ended Lady-day 1882, for various Articles used in the Metropolitan Infirmaries, Asylums, and Hospitals—*continued.*

UNION, PARISH, or DISTRICT to which the INFIRMARY, ASYLUM, or HOSPITAL belongs.	Vinegar. Per gallon.	Rice. Per cwt.	Arrowroot. Per cwt.	Sago. per cwt.	Oatmeal. Per cwt.	Pearl Barley. Per cwt.	Split Peas. Per bushel.	Potatoes. Per ton.	Wine. Per gallon.	Gin. Per gallon.	Brandy. Per gallon.	Ale. Per barrel of 36 gallons.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Camberwell	2 0	12 6	42 10	28 0	14 3	*12 0*	6 4½	82 6	12 0	11 0	20 0	36 0
Chelsea	1 0	12 6	37 4	18 8	15 0	–	–	97 6	6 6	11 0	17 6	**57 0** *34 0*
St. George-in-the-East	1 0	12 11	**112 0**	–	14 8	–	–	90 0	8 6	10 9	*13 7*	29 10
St. George's	1 2	11 4½	102 8	14 0	14 6	13 0	7 0	92 6	–	–	–	42 3
Greenwich	1 0	10 7½	37 4	–	14 7½	14 4½	6 4½	92 6	11 1½	–	20 0	30 8
Hackney	2 7	12 6	74 8	23 4	–	12 9	–	87 6	13 6	12 0	21 6	48 0
Holborn	10½	*10 6*	32 8	18 8	–	–	–	100 0	10 0	11 3	18 6	28 6
Islington	*8*	10 10½	40 8	–	13 7½	–	6 6	90 0	7 9	11 6	21 11½	54 0
Kensington	1 3	12 9	42 0	*13 0*	14 3	12 6	6 9	100 0	9 6	11 4	18 0	34 0
Lambeth	2 4	14 0	37 4	16 4	16 0	35 0	6 10½	95 0	*8 6*	*10 6*	16 1½	13 6
City of London	1 6	13 1½	51 4	18 8	13 3	15 0	**8 7½**	95 0	11 0	12 6	23 0	38 0
St. Marylebone	1 6	12 6	42 0	–	15 0	28 0	–	80 0	6 3	*10 6*	17 6	34 0
St. Olave's	9	12 0	93 4	–	13 9	**37 4**	*4 8*	95 0	11 6	12 0	23 0	48 0
St. Saviour's	1 6	12 3	44 4	–	13 4½	12 9	8 0	82 6	10 0	12 0	16 0	52 0
Shoreditch	11	**22 9**	70 0	18 8	15 6½	15 3	6 3½	81 3	8 2½	10 7	18 3	30 6
Wandsworth and Clapham	1 3	14 0	–	23 4	16 6	15 6	–	120 0	10 6	12 0	18 0	31 3
Whitechapel	10½	12 6	74 8	–	14 7½	28 0	6 6½	82 6	10 6	**13 6**	24 0	39 0
Woolwich	–	11 5	88 8	21 0	*11 0*	13 6	5 6	95 0	**14 0**	11 8½	24 0	37 0
Central London Sick Asylum District, Highgate.	2 3	11 6	–	–	**20 0**	22 0	–	**140 0**	8 9	11 0	19 6	34 0
Ditto, Cleveland St.	2 3	11 6	–	–	**20 0**	22 0	–	**140 0**	8 9	11 0	19 6	34 0
Poplar and Stepney Sick Asylum District.	*8*	13 6	**112 0**	–	–	17 6	6 1½	88 4	5 10	**13 6**	21 4½	30 0
Metropolitan Asylum District:												
Imbecile Asylums, Leavesden	**3 0** *2 6*	13 6	53 0	–	17 3	–	–	100 0 *70 0*	8 0 7 7½ 5 9	*10 6*	15 8½	51 0 27 9 24 9 *13 3*
Imbecile Asylums, Caterham	1 7	13 0	*33 0*	*13 0*	**20 0**	*12 0*	7 0	100 0	6 0	*10 6*	15 6	24 6
Imbecile Asylums, Darenth	2 3	15 3	50 0	**35 0**	–	28 0	–	110 0	12 6	–	15 9	43 6
Hospitals. Small-pox. Fever. Stockwell	1 6½	15 9	45 6	18 0	–	–	–	102 6	9 3	–	18 6	32 0
Hospitals. Small-pox. Fever. Homerton	10	15 0	50 0	–	–	–	7 6	97 6	8 6	11 6	16 9	34 0
Hospitals. Small-pox. Fever. Homerton												
Hospitals. Small-pox. Fever. Stockwell	1 6½	15 9	45 6	18 0	–	–	–	102 6	9 3	–	18 6	32 0
Hospitals. Small-pox. Fever. Fulham	1 6½	14 0	–	–	–	–	–	105 0	8 1	–	17 5	32 0
Hospitals. Small-pox. Fever. Deptford	10	15 0	50 0	18 0	16 0	16 0	7 6	96 0	8 0	*10 6*	**25 3**	31 6
Highest price (printed above in **bold** type).	3 0	22 9	112 0	35 0	20 0	37 4	8 7½	140 0	14 0	13 6	25 3	57 0
Lowest price (printed above in *italics*).	8	10 6	32 0	13 0	11 0	12 0	4 3	70 0	5 6	10 6	13 7	13 3

RETURN of the Average Prices paid, during the Year ended Lady-day 1882, for various Articles used in the Metropolitan Infirmaries, Asylums, and Hospitals—*continued.*

UNION, PARISH, or DISTRICT to which the INFIRMARY, ASYLUM, or HOSPITAL belongs.	Porter.	Coals.		Coke.	Gas.	Soap.	Soda.	Starch.	Candles.	Cost of each Funeral, including cost of coffin and all fees.	
		House.	Gas or Steam.								
	Per barrel of 36 gallons.	Per ton.	Per ton.	Per chaldron.	Per 1,000 ft.	Per cwt.	Per cwt.	Per cwt.	Per 12 lbs.	Adult.	Child.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Camberwell	*17 6*	16 6	16 0	11 0	2 10	22 0 18 9	4 9½	23 2	2 8	30 6	under 10 20 0
Chelsea	32 6	16 10½	17 10½ 15 9	10 6	3 0	24 6	3 4½	37 4	5 3	–	–
St. George-in-the-East	26 8	16 11½	14 3	10 7½	3 0	27 6	4 8	23 10	4 4	about 26 8	about 13 8
St. George's	–	17 6	17 7½	9 10½ per ton	3 0	25 6	5 1½	30 4	7 7½	35 3	27 9
Greenwich	28 0	17 0	17 0	19 0	2 10	23 6	3 9	25 8	4 0	No contract for in-door poor.	
Hackney	30 9	17 6	14 0	10 3	3 2	28 0	4 0	–	4 6	29 6	19 0
Holborn	27 0	17 6	15 6	8 0	3 2	29 0	4 3	42 0	3 5	*17 0*	11 0
Islington	29 8½	14 8½	13 10½	12 2	3 2	18 9	3 6	24 0	4 3	26 9	18 3
Kensington	28 0	16 7	15 11	9 9	3 2	24 0	4 0	32 8	4 4	28 0	15 0
Lambeth	28 0	17 10	18 10	11 4	3 0	25 2	3 7½	28 0	4 10½	23 6	20 0
City of London	28 6	14 0	13 6	7 11	3 1	24 5½	5 6	30 4	3 0	31 0	19 6
St. Marylebone	28 6	*13 8*	18 2	8 3	3 2	35 0 24 0	4 9	42 0	4 6	18 0	*7 6*
St. Olave's	28 0	15 9	17 6	12 0	2 10	19 6	3 10	28 0	6 0	29 6	19 0
St. Saviour's	33 0	17 4½	16 10½	10 9	2 10	23 0	5 9	28 0	3 0	21 0	15 0
Shoreditch	28 3	18 3½	15 9	10 0	3 2	25 4½	3 3½	25 6	3 4½	25 0	15 0
Wandsworth and Clapham	–	18 9	19 0	10 6	2 10	24 0	3 7	23 4	3 3	32 6	25 0
Whitechapel	30 9	17 6	14 6	11 6	3 0	28 0	3 3	37 4	3 6	26 3	17 6
Woolwich	37 0	18 6	–	11 0	3 3	24 9	3 7½	39 8	3 3	30 2	17 9
Central London Sick Asylum District, Highgate.	28 0	17 6	14 6	9 6	3 2	28 6	5 6	34 6	4 6	26 0	–
Ditto. Cleveland St.	28 0	17 3	18 0	9 6	3 2	28 6	5 6	34 6	4 6	26 0	–
Poplar and Stepney Sick Asylum District.	28 0	19 0	16 9	8 4	3 0	22 0	4 0	32 8	*2 0*	27 7	18 3
Metropolitan Asylum District:											
Imbecile Asylums. Leavesden	23 6	16 2	17 9 *12 10*	12 0	1 9½	24 0	5 7½	43 0 22 0	5 3 4 9	21 0	21 0
Imbecile Asylums. Caterham	18 0	17 0	17 6 13 6	12 0	*1 7*	25 6	5 6	39 0	4 9	21 0	21 0
Imbecile Asylums. Darenth	27 6	19 5 18 11	19 9 17 3	*7 0*	1 9	38 0 28 0 26 0	4 6	22 6	3 6	21 0	21 0
Hospitals, Small-pox, Fever. Stockwell	–	16 8½	18 6	9 10½	2 10	24 6 *10 7½*	4 3½	42 0	3 3	34 6	25 0
Hospitals, Small-pox, Fever. Homerton	–	17 0	17 6	12 6	3 2	24 3	4 3	37 4	5 0	35 6	22 6
Hospitals, Small-pox, Fever. Homerton											
Hospitals, Small-pox, Fever. Stockwell	–	16 8½	18 6	9 10½	2 10	35 9 24 6 22 0	4 3½	42 0	3 3	34 6	25 0
Hospitals, Small-pox, Fever. Fulham	–	17 7	17 7½	9 0	3 0	24 3	4 3	37 4	4 0	50 0	30 0
Hospitals, Small-pox, Fever. Deptford	–	19 1	18 0	12 3	2 10	21 0	4 4	37 4	4 9	36 0	26 0
Highest price (printed above in **bold** type).	37 0	19 5	19 9	12 6	3 3	38 0	5 9	43 0	7 7½	50 0	30 0
Lowest price (printed above in *italics*).	17 6	13 8	12 10	7 0	1 7	10 7½	3 3	22 0	2 0	17 0	7 6

No. 71.—Return of Expenditure during the Year ended Lady-day 1882 at the Metropolitan Workhouses.

Union or Parish to which the Workhouse belongs. (*Arranged according to the number of Days Maintenance at the Workhouse.*)	Number of Days Maintenance (including Paupers chargeable to other Authorities but excluding Casual Paupers).	PROVISIONS for Inmates (Purchased and from Farm. 52 weeks).								
		Flour and Bread.	Meat, including Bacon, Preserved Meat, and Extract of Meat.	Vegetables.	Grocery and Cheesemongery, including Butter, Eggs, Lard, Chandlery, &c.	Milk.	Beer.	Wine and Spirits.	Other Provisions.	Total.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
		£	£	£	£	£	£	£	£	£
1. St. Pancras	639,777	2,279	5,887	826	3,347	886	654	351	46	14,276
2. St. Marylebone	621,741	2,668	6,928	877	3,194	720	470	255	65	15,177
3. Holborn, City Road	493,298	2,271	5,772	609	3,248	1,160	124	291	24	13,499
4. Islington (Workhouse and Infirmary)	467,545	1,874	5,622	409	2,454	1,004	306	388	101	12,158
5. Bethnal Green	459,818	2,015	6,787	554	2,680	1,310	160	161	332	13,999
6. St. George's, Fulham Road	382,030	1,894	3,044	410	1,663	410	8	2	4	7,435
7. Greenwich	362,524	1,778	3,300	415	2,134	446	9	—	—	8,082
8. Strand	350,726	1,856	3,905	498	1,879	329	690	388	172	9,717
9. Kensington	271,874	1,075	1,991	314	1,145	453	15	11	57	5,061
10. Stepney	260,529	1,084	1,976	403	1,347	305	42	3	17	5,177
11. Poplar	246,452	1,109	1,928	231	773	252	54	7	5	4,359
12. St. Giles	232,739	1,010	2,019	355	944	241	9	52	16	4,646
13. St. George-in-the-East	230,779	1,137	1,881	232	1,167	172	52	52	—	4,693
14. Chelsea	222,864	1,232	1,643	196	1,140	209	36	3	21	4,480
15. Shoreditch	219,949	993	1,632	186	1,251	235	7	1	13	4,318
16. Westminster	217,475	966	2,444	363	794	510	260	153	3	5,493
17. Paddington	214,447	1,085	2,592	232	1,303	327	435	59	139	6,172
18. St. Olave's, Bermondsey	202,986	912	1,976	316	1,239	317	18	10	—	4,794
19. St. Saviour's, St. George's	191,250	925	1,535	249	812	110	88	1	8	3,728
20. St. Saviour's, Christchurch	186,491	869	1,652	224	949	164	89	65	36	4,048
21. Mile End Old Town [a] (Hamlet)	181,967	621	2,067	227	1,066	532	102	342	121	5,078
22. Holborn, Gray's Inn Road	170,222	945	1,861	232	761	230	18	85	25	4,157
23. Lambeth (Old Workhouse), Princes Road	168,318	645	1,489	173	930	146	16	—	—	3,399
24. Lambeth (New Workhouse), Renfrew Road	166,754	624	1,696	193	744	175	49	2	—	3,483
25. Fulham	157,613	672	2,053	221	799	408	163	317	93	4,726
26. Hackney	156,287	664	1,388	168	750	142	151	54	66	3,383
27. Woolwich	148,794	723	1,547	339	1,000	283	8	—	3	3,903
28. Whitechapel	145,496	721	855	117	459	111	3	—	24	2,290
29. City of London, Holloway	144,289	551	2,272	221	988	207	585	181	275	5,280
30. Camberwell, Gordon Road	142,381	720	1,380	171	815	313	—	1	—	3,400
31. Do. Havil Street	138 980	318	1,723	139	725	373	10	32	3	3,323
32. City of London, Homerton	128,608	525	1,327	153	811	255	210	101	36	3,418
33. Wandsworth and Clapham	118,498	597	1,084	34	705	175	6	2	5	2,608
34. Lewisham	95,401	494	1,522	96	586	131	169	230	4	3,232
35. Hampstead	69,441	415	720	89	639	297	3	28	208	2,399
36. St. Olave's, Parish Street	59,227	272	388	68	206	95	16	2	4	1,051
37. St. George's (Mount Street)	57,070	302	406	48	267	68	1	1	2	1 095
38. St. Olave's Rotherhithe	31,064	138	252	29	145	15	15	—	33	627
Total including Islington Infirmary [b]	8,755,504	38,979	88,544	10,617	45,869	13,516	5,051	3,637	1,961	208,164

[a] The Workhouse was principally used as an Infirmary during the above period, and during the summer months a portion of the building was occupied for small-pox cases.

[b] The items in respect of the Islington Workhouse cannot be given separately.

RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Workhouses—*continued.*

UNION or PARISH to which the Workhouse belongs. (*Arranged according to the number of Days Maintenance at the Workhouse.*)	NECESSARIES for Inmates, Officers, and the Building. 52 weeks.						CLOTHING (The cost of the New Stock acquired.)
	Warming.	Cleansing.	Lighting.	Water.	Other Necessaries.	TOTAL.	
	12.	13.	14	15	16.	17.	18.
	£	£	£	£	£	£	£
1. St. Pancras	1,635	549	508	119	—	2,871	2,158
2. St. Marylebone	1,275	485	635	399	36	2,830	3,881
3. Holborn, City Road	1,057	559	502	439	29	2,586	735
4. Islington (Workhouse and Infirmary)	801	192	558	393	90	2,034	812
5. Bethnal Green	1,240	431	490	76	98	2,335	1,771
6. St. George's, Fulham Road	814	382	270	186	60	1,712	969
7. Greenwich	1,018	243	396	18	8	1,683	1,161
8. Strand	949	323	256	—	60	1,588	672
9. Kensington	812	347	404	355	197	2,115	678
10. Stepney	504	176	164	211	67	1,122	1,099
11. Poplar	383	228	484	98	383	1,576	692
12. St. Giles	510	281	365	282	23	1,461	973
13. St. George-in-the-East	429	168	218	213	12	1,040	1,229
14. Chelsea	336	135	122	64	57	714	547
15. Shoreditch	789	304	209	78	27	1,407	838
16. Westminster	481	128	362	145	45	1,161	394
17. Paddington	614	207	402	140	41	1,404	405
18. St. Olave's, Bermondsey	305	135	254	98	129	921	581
19. St. Saviour's, St. George's	361	99	174	81	21	736	891
20. St. Saviour's, Christchurch	321	133	257	103	82	896	366
21. Mile End Old Town (Hamlet)[a]	335	132	305	135	22	929	589
22. Holborn, Gray's Inn Road	404	140	257	45	67	913	492
23. Lambeth (Old Workhouse), Princes Road	239	86	204	121	22	672	529
24. Lambeth (New Workhouse), Renfrew Road	717	301	402	32	18	1,470	1,707
25. Fulham	398	182	174	202	38	994	359
26. Hackney	425	170	195	95	39	924	505
27. Woolwich	455	108	248	60	120	991	453
28. Whitechapel	317	111	142	107	72	749	577
29. City of London, Holloway	405	132	135	175	8	855	445
30. Camberwell, Gordon Road	549	65	159	136	54	963	556
31. Do. Havil Street	525	117	150	3	8	803	534
32. City of London, Homerton	396	161	200	144	45	946	868
33. Wandsworth and Clapham	266	94	172	—	14	546	376
34. Lewisham	272	57	79	37	33	478	241[b]
35. Hampstead	322	91	181	130	42	766	275
36. St. Olave's, Parish Street	186	88	63	94	36	467	186
37. St. George's (Mount Street)	278	102	183	54	53	670	103
38. St. Olave's, Rotherhithe	93	23	27	12	13	168	30
TOTAL including Islington Infirmary	21,216	7,665	10,366	5,080	2,169	46,496	28,677

[a] The Workhouse was principally used as an Infirmary during the above period, and during the summer months a portion of the building was occupied for small-pox cases.
[b] The erection of a temporary iron building caused unusual expenditure under these heads.

RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Workhouses—*continued.*

UNION OR PARISH to which the Workhouse belongs. (*Arranged according to the number of Days Maintenance at the Workhouse.*)	OTHER CHARGES.							
	Drugs, Medical and Surgical Appliances.	Funerals.	Officers and Servants (excluding Farm, &c.)			Furniture and Bedding, and Property, and Repairs to Ditto.	Rent, Rates, Taxes, Tithes, Insurance.	Building and Fixtures, and Repairs to Ditto.
			Salaries, Wages, Gratuities, and Fees to Officers.	Rations.	Uniform.			
	19.	20.	21.	22.	23.	24.	25.	26.
	£	£	£	£	£	£	£	£
1. St. Pancras	445	316	2,596	1,914	148	1,526	87	763
2. St. Marylebone	186	133	2,488	647	65	1,244	743	799
3. Holborn, City Road	329	133	1,306	574	2	792	1,068	801
4. Islington (Workhouse and Infirmary)	379	371	1,739	1,069	63	858	623	2,543
5. Bethnal Green	455	348	3,040	1,619	38	523	328	1,021
6. St. George's, Fulham Road	100	8	1 083	776	69	439	59	379
7. Greenwich	13	3	1,049	572	25	531	479	687
8. Strand	160	89	1,174	644	17	991[b]	1,198	1,752[b]
9. Kensington	9	11	1,609	862	95	462	43	1,374
10. Stepney	39	34	967	501	17	349	541	570
11. Poplar	40	78	1,135	554	42	483	632	625
12. St. Giles	84	188	1,107	557	54	2,291	50	431
13. St. George-in-the-East	—	69	846	579	38	479	130	89
14. Chelsea	98	194	809	393	32	476	43	517
15. Shoreditch	3	—	675	306	10	726	42	486
16. Westminster	510	114	2,185	676	24	353	1,368	315
17. Paddington	159	112	1,428	619	24	377	46	1,007
18. St. Olave's, Bermondsey	80	101	669	608	45	1,002	1,343	921
19. St. Saviour's, St. George's	3	97	832	356	1	216	1,066	267
20. St. Saviour's, Christchurch	8	111	618	384	39	280	242	633
21. Mile End Old Town (Hamlet)[a]	226	152	945	318	17	494	309	434
22. Holborn, Gray's Inn Road	49	18	953	423	15	387	482	157
23. Lambeth (Old Workhouse), Princes Road	36	2	354	282	6	220	253	268
24. Lambeth (New Workhouse), Renfrew Road	27	—	1,302	818	50	1,600	324	507
25. Fulham	172	54	1,108	753	19	560	232	677
26. Hackney	56	—	738	283	20	253	276	330
27. Woolwich	—	—	1,148	561	—	356	415	190
28. Whitechapel	—	—	536	292	13	157	352	714
29. City of London, Holloway	68	49	770	285	14	90	431	240
30. Camberwell, Gordon Road	—	—	746	516	13	212	470	397
31. Do. Havil Street	128	64	726	437	13	278	282	484
32. City of London, Homerton	21	17	969	622	51	377	409	487
33. Wandsworth and Clapham	—	—	924	290	24	472	213[c]	488
34. Lewisham	48	85	549	207	17	585[d]	249	1,281[c]
35. Hampstead	123	65	868	380	5	287	114	182
36. St. Olave's, Parish Street	11	23	338	247	5	219	662	315
37. St. George's (Mount Street)	5	200	992	329	58	209	1,223[e]	275
38. St. Olave's, Rotherhithe	28	1	401	183	5	86	693	108
TOTAL including Islington Infirmary	3,698	3,240	41,722	21,436	1,193	21,220	17,520	23,514

[a] The Workhouse was principally used as an Infirmary during the above period, and during the summer months a portion of the building was occupied for small-pox cases.
[b] Including exceptional sums for new laundry machinery and extensive repairs, &c.
[c] Approximate apportionment.
[d] The erection of a temporary iron building caused unusual expenditure under these heads.
[e] 1000*l.* rent is paid.

RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Workhouses—*continued.*

UNION or PARISH to which the Workhouse belongs. (*Arranged according to the number of Days Maintenance at the Workhouse.*)	OTHER CHARGES —*cont.*			TOTAL EXPENDITURE, excluding Repayment of Loans and Interest and deducting Profit Recoupments.	LOANS.	PROFIT RECOUPMENTS.	
	Other Expenditure debited to this Establishment, except Loan Account.	TOTAL.	TOTAL of "Other Charges" after deducting the Profit Recoupments.		Repayment of Principal and Interest on Loans for this Building.	Net Farm Profit or Labour Profit.	From Sale of Stores, Waste, &c.
	27.	28.	29.	30.	31.	32.	33.
	£	£	£	£	£	£	£
1. St. Pancras	655	8,450	8,196	27,501	1,121	46	208
2. St. Marylebone	216	6,521	6,159	28,047	2,835	198	164
3. Holborn, City Road	—	5,005	4,933	21,753	2,816	51	21
4. Islington (Workhouse and Infirmary)	187	7,832	7,541	22,545	5,273	—	291
5. Bethnal Green	196	7,568	7,568	25,673	1,036	—	—
6. St. George's, Fulham Road	122	3,035	2,989	13,105	2,158[b]	—	46
7. Greenwich	86	3,445	3,347	14,273	—	2	96
8. Strand	49	6,074	5,606	17,583	2,276	382	86
9. Kensington	118	4,583	4,308	12,162	1,866[c]	214	61
10. Stepney	90	3,108	2,939	10,337	1,422	149	20
11. Poplar	113	3,702	3,419	10,046	4,057	272	11
12. St. Giles	84	4,846	4,720	11,806	4,509	118	8
13. St. George-in-the-East	68	2,298	2,226	9,188	377	55	17
14. Chelsea	15	2,577	2,445	8,186	1,401	42	90
15. Shoreditch	22	2,270	2,077	8,640	742[d]	173	20
16. Westminster	6	5,151	4,990	12,038	1,334	108	53
17. Paddington	117	3,889	3,382	11,363	1,609	413	94
18. St. Olave's, Bermondsey	96	4,865	4,453	10,749	—	307	105
19. St. Saviour's, St. George's	12	2,850	2,637	7,992	—	204	9
20. St. Saviour's, Christchurch	10	2,325	2,278	7,588	205	—	47
21. Mile End Old Town (Hamlet)[a]	58	2,953	2,796	9,392[a]	289	102	55
22. Holborn, Gray's Inn Road	19	2,503	2,331	7,893	—	122	50
23. Lambeth (Old Workhouse), Princes Road	45	1,466	1,450	6,050	—	—	16
24. Lambeth (New Workhouse), Renfrew Road	121	4,749	4,654	11,314[e]	4,815	73	22
25. Fulham	20	3,595	3,510	9,589	379	28	57
26. Hackney	53	2,009	1,776	6,588	1,096	216	17
27. Woolwich	54	2,704	2,341	7,688	2,605	216	147
28. Whitechapel	36	2,100	1,844	5,460	2,168	252	4
29. City of London, Holloway	580	2,527	2,486	9,066	5,333[f]	—	41
30. Camberwell, Gordon Road	28	2,382	2,201	7,120	3,132	170	11
31. Do. Havil Street	31	2,443	2,414	7,074	—	—	29
32. City of London, Homerton	727	3,680	3,635	8,867	373[f]	—	45
33. Wandsworth and Clapham	—	2,411	2,295	5,825	218	89	27
34. Lewisham	52	3,073	2,924	6,875	2,719	134	15
35. Hampstead	88	2,112	2,107	5,547	754	—	5
36. St. Olave's Parish Street	27	1,847	1,839	3,543	—	—	8
37. St. George's (Mount Street)	159	3,450	3,425	5,293	—	—	25
38. St. Olave's, Rotherhithe	25	1,530	1,181	2,006	—	331	18
TOTAL including Islington Infirmary	4,385	137,928	131,422	414,759	55,378	4,467	2,039

[a] The Workhouse was principally used as an Infirmary during the above period, and during the summer months a portion of the building was occupied for small-pox cases.

[b] Approximate apportionment.

[c] 1,844*l.*, being proportion of interest paid prior to the completion of the purchase on the amount of the purchase money of the premises recently added to the Workhouse.

[d] Interest only. Repayments of principal are met by the Sale of Property Account.

[e] The increase on previous year in rate of cost was due to the reduction in average number o inmates (685 to 458) through the building operations; also to unusually large outlay for stock of clothing, furniture, &c.

[f] Loans for both Holloway and Homerton Workhouses are included under Homerton.

Analysis of the Return of Expenditure during the Year ended Lady-day 1882 at the Metropolitan Workhouses.

Union or Parish to which the Workhouse belongs. (*Arranged according to the Total Cost per Head at the Workhouse.*)	Average Number of Inmates maintained daily during the Year.*	Provisions.		Necessaries.		Clothing.		Other Charges.		Total Expenditure during the Year.	Total Cost per Head per Annum.
		Total.	Cost per Head.	Total.	Cost per Head.	Total.	Cost per Head.	Total.	Cost per Head.		
								Excluding Loans, and deducting Profit Recoupments.			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
		£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
1. St. George's, Mount Street	156·7	1,095	6 19 9	670	4 5 6	103	13 2	3,425	21 17 2	5,293	33 15 7
2. Hampstead	190·7	2,399	12 11 7	766	4 0 4	275	1 8 10	2,107	11 1 0	5,547	29 1 9
3. Lewisham	262·0	3,232	12 6 9	478	1 16 6	241	18 5	2,924	11 3 2	6,875	26 4 10
4. City of London, Homerton	353·3	3,418	9 13 6	946	2 13 7	868	2 9 2	3,635	10 5 9	8,867	25 1 11
5. Lambeth, Renfrew Road	458·1	3,483	7 12 1	1,470	3 4 2	1,707	3 14 6	4,654	10 3 2	11,314	24 13 11
6. St. Olave's, Rotherhithe	85·3	627	7 7 0	168	1 19 5	30	7 0	1,181	13 16 10	2,006	23 10 4
7. City of London, Holloway	396·3	5,280	13 6 6	855	2 3 2	445	1 2 5	2,486	6 5 6	9,066	22 17 6
8. Fulham	433·0	4,726	10 18 3	994	2 5 11	359	16 7	3,510	8 2 1	9,589	22 2 11
9. St. Olave's, Parish Street	162·7	1,051	6 9 2	467	2 17 5	186	1 2 10	1,839	11 6 1	3,543	21 15 6
10. Bethnal Green	1,263·2	13,999	11 1 8	2,335	1 17 0	1,771	1 8 0	7,568	5 19 10	25,673	20 6 6
11. Westminster	597·4	5,493	9 3 11	1,161	1 18 10	394	13 2	4,990	8 7 1	12,038	20 3 0
12. Paddington	589·1	6,172	10 9 6	1,404	2 7 8	405	13 9	3,382	5 14 10	11,363	19 5 9
13. St. Olave's, Bermondsey	557·6	4,794	8 11 11	921	1 13 0	581	1 0 10	4,453	7 19 9	10,749	19 5 6
14. Woolwich	408·7	3,903	9 11 0	991	2 8 6	453	1 2 2	2,341	5 14 6	7,688	18 16 3
15. Mile End Old Town (Hamlet)	499·9	5,078	10 3 2	929	1 17 2	589	1 3 7	2,796	5 11 10	9,392	18 15 9
16. Camberwell, Havil Street	381·8	3,323	8 14 1	803	2 2 1	534	1 8 0	2,414	6 6 5	7,074	18 10 7
17. St. Giles	639·4	4,646	7 5 4	1,461	2 5 8	973	1 10 5	4,720	7 7 8	11,800	18 9 1
18. Strand	963 5	9,717	10 1 8	1,588	1 13 0	672	13 11	5,606	5 16 4	17,583	18 5 0
19. Camberwell, Gordon Road	391·1	3,400	8 13 10	963	2 9 3	556	1 8 5	2,201	5 12 7	7,120	18 4 1
20. Wandsworth and Clapham	325·5	2,608	8 0 3	546	1 13 7	376	1 3 1	2,295	7 1 0	5,825	17 17 11

* Dividing the number in Col. 2 of page 231 by 364.

ANALYSIS of the RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Workhouses—*continued.*

UNION or PARISH to which the Workhouse belongs. (*Arranged according to the Total Cost per Head at the Workhouse.*)	Average Number of Inmates maintained daily during the Year.*	PROVISIONS.		NECESSARIES.		CLOTHING.		OTHER CHARGES.		TOTAL EXPENDITURE during the Year.	TOTAL Cost per Head per Annum.
		TOTAL.	Cost per Head.	Total.	Cost per Head.	Total.	Cost per Head.	Total.	Cost per Head.		
								Excluding Loans and deducting Profit Recoupments.			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
	£	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
21. Islington (Workhouse and Infirmary)	1,284·4	12,158	9 9 4	2,034	1 11 8	812	12 8	7,541	5 17 5	22,545	17 11 1
22. Holborn, Gray's Inn Road	467·6	4,157	8 7 10	913	1 19 1	492	1 1 1	2,331	4 19 8	7,893	16 17 8
23. St. Marylebone	1,707·8	15,177	8 17 9	2,830	1 13 2	3,881	2 5 5	6,159	3 12 2	28,047	16 8 6
24. Kensington	746·9	5,061	6 15 6	2,115	2 16 8	678	18 2	4,308	5 15 4	12,162	16 5 8
25. Holborn, City Road	1,355·2	13,499	9 19 3	2,586	1 18 2	735	10 10	4,933	3 12 10	21,753	16 1 0
26. St. Pancras	1,757·6	14,276	8 2 5	2,871	1 12 8	2,158	1 4 7	8,196	4 13 3	27,501	15 12 11
27. Hackney	429·3	3,383	7 17 7	924	2 3 1	505	1 3 6	1,776	4 2 9	6,588	15 6 11
28. St. Saviour's, St. George's	525·4	3,728	7 1 11	736	1 8 0	891	1 13 11	2,637	5 0 5	7,992	15 4 3
29. Poplar	677·0	4,359	6 8 9	1,576	2 6 7	692	1 0 5	3,419	5 1 0	10,046	14 16 9
30. St. Saviour's, Christchurch	512·3	4,048	7 18 0	896	1 15 0	366	14 3	2,278	4 8 11	7,588	14 16 2
31. St. George-in-the-East	634·0	4,693	7 8 0	1,040	1 12 10	1,229	1 18 9	2,226	3 10 3	9,188	14 9 10
32. Stepney	715·7	5,177	7 4 8	1,122	1 11 4	1,099	1 10 9	2,939	4 2 2	10,337	14 8 10
33. Greenwich	995·9	8,082	8 2 4	1,683	1 13 10	1,161	1 3 4	3,347	3 7 3	14,273	14 6 8
34. Shoreditch	604·2	4,318	7 2 11	1,407	2 6 7	838	1 7 9	2,077	3 8 9	8,640	14 6 0
35. Whitechapel	399·7	2,290	5 14 7	749	1 17 6	577	1 8 10	1,844	4 12 3	5,460	13 13 2
36. Chelsea	612·2	4,480	7 6 4	714	1 3 4	547	17 10	2,445	3 19 11	8,186	13 7 5
37. Lambeth, Princes Road	462·4	3,399	7 7 0	672	1 9 1	529	1 2 11	1,450	3 2 9	6,050	13 1 8
38. St. George's, Fulham Road	1,049·5	7,435	7 1 8	1,712	1 12 8	969	18 6	2,989	2 16 11	13,105	12 9 9
TOTAL or AVERAGE including Islington Infirmary	24,052·2	208,164	8 13 1	46,496	1 18 8	28,677	1 3 10	131,422	5 9 3	414,759	17 4 11

* Dividing the number in Col. 2 of page 231 by 364.

No. 72.—Return of Expenditure during the Year ended Lady-day 1882 at the Metropolitan Infirmaries, Asylums and Hospitals.

Union or Parish to which the Infirmary belongs, or District to which the Asylum or Hospital belongs. (*Arranged according to the number of Days Maintenance at the Workhouse.*)	Number of Days Maintenance (including Paupers chargeable to other Authorities).	Provisions for Inmates (purchased and from Farm. 52 weeks). Flour and Bread.	Meat, including Bacon, Preserved Meat, and Extract of Meat.	Vegetables.	Grocery and Cheesemongery, including Butter, Eggs, Lard, Corn-chandlery, &c.	Milk.	Beer.	Wine and Spirits.	Other Provisions.	Total.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
Infirmaries and Sick Asylums.		£	£	£	£	£	£	£	£	£
1. St. Saviour's	352,849	1,661	4,711	407	1,880	915	312	445	288	10,619
2. Holborn	234,677	1,081	2,865	323	1,877	797	95	203	368	7,669
3. Whitechapel	218,825	1,076	2,495	229	1,245	966	35	64	224	6,334
4. Lambeth	215,488	761	2,944	162	1,645	1,006	251	441	288	7,498
5. St. George's	193,936	931	2,837	141	1,417	1,020	3	4	311	6,664
6. City of London	185,605	587	2,486	151	1,183	278	496	95	176	5,452
7. Shoreditch	171,901	684	3,040	175	1,079	734	158	393	68	6,331
8. Poplar and Stepney Sick Asylum District	170,768	729	3,260	142	1,152	942	242	110	267	6,844
9. Marylebone (open part of year only.)	158,859	661	2,055	109	1,117	1,043	99	281	96	5,461
10. Kensington	153,497	532	2,216	206	1,186	889	116	341	277	5,763
11. Hackney	146,650	621	2,252	129	1,078	814	8	137	188	5,227
12. Wandsworth and Clapham	143,053	670	2,009	149	892	592	2	43	492	4,849
13. Central London Sick Asylum District, Highgate	132,651	622	3,005	220	1,018	539	233	155	339	6,131
14. St. Olave's	119,997	586	1,896	81	794	884	41	280	148	4,710
15. Chelsea	96,867	450	1,435	73	674	553	93	103	124	3,505
16. St. George-in-the-East	84,581	334	971	87	378	379	23	96	115	2,383
17. Greenwich	79,984	340	1,379	62	574	386	89	140	186	3,156
18. Camberwell	75,911	328	1,451	70	531	430	1	221	36	3,068
19. Central London Sick Asylum District, Cleveland Street	67,186	310	1,427	122	501	399	20	33	195	3,007
20. Woolwich	64,203	260	695	72	561	406	22	38	112	2,166
Total (excluding Islington Infirmary, see note (a))	3,067,488	13,224	45,429	3,110	20,782	13,972	2,339	3,683	4,228	106,837
Imbecile Asylums.										
1. Metropolitan Asylum District, Caterham	726,850	3,897	9,796	1,066	5,114	1,174	1,401	403	1,397	24,248
2. Do. Leavesden	725,337	3,571	7,563	1,145	5,267	829	2,230	391	233	21,229
3. Do. Darenth [b] Asylum for Adults	262,647	1,829	4,053	444	2,019	1,065	615	118	653	10,796
4. Do. for Children										
Total	1,714,834	9,297	21,412	2,655	12,400	3,068	4,246	912	2,283	56,273
Hospitals [c].										
1. Metropolitan Asylum District, Deptford Small-pox	97,143	527	1,794	86	167	736	144	757	623	4,834
2. Do. Homerton Fever	93,814	465	1,624	194	1,269	1,035	412	341	1,495	6,835
3. Do. Homerton Small-pox										
4. Do. Stockwell Fever	56,408	205	730	38	1,003	596	19	63	9	2,663
5. Do. Fulham Small-pox	41,821	234	534	52	322	316	46	181	133	1,818
6. Do. Stockwell Small-pox	30,485	137	688	60	444	269	8	37	253	1,896
Total	319,671	1,568	5,370	430	3,205	2,952	629	1,379	2,513	18,046

[a] The items in respect of the infirmary and the workhouse at Islington cannot be given separately. For the totals for the two establishments see the Return similar to this relating to Metropolitan Workhouses.

[b] The treatment for a time of small-pox patients on the site at Darenth rendered it necessary for these two asylums to be administered from one source, consequently separate returns cannot be made.

[c] Excluding Hampstead Hospital, which was not open during this year, and also the temporary "Atlas." Small-pox Hospital Ship and the Darenth Small-pox Convalescent Camp.

RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Infirmaries, Asylums, and Hospitals—*continued.*

UNION or PARISH to which the Infirmary belongs, or DISTRICT to which the Asylum or Hospital belongs. (*Arranged according to the number of Days Maintenance at the Workhouse.*)	NECESSARIES for Inmates, Officers, and the Building. 52 weeks.						CLOTHING. (The cost of the New Stock required.)
	Warming.	Cleansing.	Lighting.	Water.	Other Necessaries.	TOTAL.	
	12.	13.	14.	15.	16.	17.	18.
INFIRMARIES AND SICK ASYLUMS.	£	£	£	£	£	£	£
1. St. Saviour's	1,169	287	499	8	105	2,068	840
2. Holborn	860	296	741	559	65	2,521	353
3. Whitechapel	785	347	570	160	75	1,943	782
4. Lambeth	745	337	743	–	21	1,846	543
5. St. George's	1,178	310	380	190	181	2,239	460
6. City of London	868	223	305	20	39	1,455	513
7. Shoreditch	419	312	506	–	54	1,291	503
8. Poplar and Stepney Sick Asylum District	841	221	430	287	285	2,064	554
9. Marylebone (open part of year only.)	1,451	250	734	156	13	2,604	1,876
10. Kensington	837	366	356	250	93	1,902	392
11. Hackney	343	670[a]	554	90	256	1,713	635
12. Wandsworth and Clapham	751	200	221	10	19	1,201	297
13. Central London Sick Asylum District, Highgate	1,092	292	336	278	46	2,044	412
14. St. Olave's	494	183	351	68	23	1,119	158
15. Chelsea	544	150	227	78	64	1,063	364
16. St. George-in-the-East	536	129	336	153	–	1,154	264
17. Greenwich	506	130	251	–	6	893	229
18. Camberwell	399	113	184	9	15	720	103
19. Central London Sick Asylum District, Cleveland Street	391	98	279	66	23	857	187
20. Woolwich	425	79	240	24	65	833	134
TOTAL (excluding Islington Infirmary, see note (b))	14,634	4,993	8,049	2,406	1,448	31,530	9,599
IMBECILE ASYLUMS.							
1. Metropolitan Asylum District, Caterham	1,967	1,140	764	–	543	4,414	7,090
2. Do. Leavesden	2,140	1,172	663	–	522	4,497	5,025
3. Do. Darenth[c] Asylum for Adults	2,700	1,049	538	–	393	4,680	3,569
4. Do. for Children							
TOTAL	6,807	3,361	1,965	–	1,458	13,591	15,684
HOSPITALS (d).							
1. Metropolitan Asylum District, Deptford Small-pox	1,256	999	835	380	229	3,699	1,400[e]
2. Do. Homerton Fever	1,647	543	957	605	128	3,880	4,594[e]
3. Do. Homerton Small-pox							
4. Do. Stockwell Fever	814	132	287	86	4	1,323	211
5. Do. Fulham Small-pox	585	174	402	154	9	1,324	793
6. Do. Stockwell Small-pox	570	256	190	163	–	1,179	274
TOTAL	4,872	2,104	2,671	1,388	370	11,405	7,272

[a] Includes 330*l.* paid for washing linen. Opening of an additional infirmary pavilion caused the laundry accommodation to be temporarily insufficient.

[b] The items in respect of the infirmary and the workhouse at Islington cannot be given separately. For the totals for the two establishments see the Return similar to this relating to Metropolitan Workhouses.

[c] The treatment for a time of small-pox patients on the site at Darenth rendered it necessary for these two asylums to be administered from one source, consequently separate returns cannot be made.

[d] Excluding Hampstead Hospital, which was not open during this year, and also the temporary "Atlas" Small-pox Hospital Ship and the Darenth Small-pox Convalescent Camp.

[e] Increase on previous years attributed to fuller exercise by medical superintendents of discretionary power as to disinfection and destruction of patients' clothing.

RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Infirmaries, Asylums, and Hospitals—*continued.*

UNION or PARISH to which the Infirmary belongs, or DISTRICT to which the Asylum or Hospital belongs. *(Arranged according to the number of Days Maintenance at the Workhouse.)*	OTHER CHARGES.							
	Drugs, Medical and Surgical Appliances.	Funerals.	Officers and Servants (excluding Farm Account). Salaries, Wages, Gratuities, and Fees to Officers.	Rations.	Uniform.	Furniture and Bedding and Property, and Repairs to ditto.	Rent, Rates, Taxes, Tithes, and Insurance.	Building and Fixtures, and Repairs to ditto.
	19.	20.	21.	22.	23.	24.	25.	26.
INFIRMARIES AND SICK ASYLUMS.	£	£	£	£	£	£	£	£
1. St. Saviour's	650	195	2,310	1,267	72	808	2,239	333
2. Holborn	641	131	2,895	1,630	59	898	804	446
3. Whitechapel	304	203	2,801	1,102	71	960	544	1,367
4. Lambeth	802	301	3,472	2,318	43	837	423[a]	904
5. St. George's	300	126	3,778	1,885	15	787	470	673
6. City of London	212	240	3,543	1,826	116	891	883	402
7. Shoreditch	537	226	2,574	1,269	67	1,058	42	561
8. Poplar and Stepney Sick Asylum District	331	263	3,751	2,231	3	1,082	625	1,529
9. Marylebone (open part of year only.)	866	124	3,443	2,017	277	80[f]	430	88
10. Kensington	480	192	3,117	1,903	226	1,227	43	1,028
11. Hackney	334	173	2,204	1,393	185	1,601	347	342
12. Wandsworth and Clapham	409	205	2,331	1,189	78	596	425	488
13. Central London Sick Asylum, District, Highgate	550	120	3,251	2,249	107	595	320	1,646
14. St. Olave's	536	81	1,967	1,875	78	686	617	380
15. Chelsea	389	–	2,322	1,206	18	457	235	502
16. St. George-in-the-East	–	144	2,309	1,361	96	402	–	77
17. Greenwich	319	181	1,886	940	30	163	405	842
18. Camberwell	256	157	1,741	811	3	277	283	451
19. Central London Sick Asylum District, Cleveland Street	168	90	1,855	1,034	82	535	638	563
20. Woolwich	308	142	1,680	850	28	174	389	118
TOTAL (excluding Islington Infirmary, see note (b))	8,482	3,294	53,230	30,416	1,742	14,168	10,162	12,800
IMBECILE ASYLUMS.								
1. Metropolitan Asylum District, Caterham	291	155	5,437	3,261	627	5,248	908	5,382
2. Do. Leavesden	397	101	5,737	3,378	400	2,000	535	5,941
3. Do. Darenth[c] Asylum for Adults	175	49	3,457	4,134	350	1,602	198	2,974
4. Do. for Children								
TOTAL	863	305	14,631	10,773	1,377	8,850	1,641	14,297
HOSPITALS. [d]								
1. Metropolitan Asylum District, Deptford Small-pox	525	499	4,014	4,562	310	2,348	566	10,699[e]
2 Do. Homerton Fever	475	498	6,314	7,551	1,097	2,662	649	11,792[e]
Do. Homerton Small-pox								
4. Do. Stockwell Fever	56	129	2,933	1,989	223	456	356	874
5. Do. Fulham Small-pox	201	245	2,532	1,927	116	208	493	1,416
6. Do. Stockwell Small-pox	176	114	2,519	1,706	234	229	127	780
TOTAL	1,433	1,485	18,312	17,735	1,980	5,903	2,191	25,561

[a] Poor rates were paid for the first time this year.

[b] The items in respect of the infirmary and the workhouse at Islington cannot be given separately. For the totals for the two establishments see the Return similar to this relating to Metropolitan Workhouses.

[c] The treatment for a time of small-pox patients on the site at Darenth rendered it necessary for these two asylums to be administered from one source, consequently separate returns cannot be made.

[d] Excluding Hampstead Hospital, which was not open during this year, and also the temporary "Atlas" Small-pox Hospital Ship and the Darenth Small-pox Convalescent Camp.

[e] Amount altogether exceptional in consequence of special arrangements in connection with the epidemic of small-pox.

[f] The smallness of the amount is stated to be due to the Infirmary having been "recently furnished by loan."

RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Infirmaries, Asylums, and Hospitals—*continued.*

UNION or PARISH to which the Infirmary belongs, or DISTRICT to which the Asylum or Hospital belongs. (*Arranged according to the number of Days Maintenance at the Workhouse.*)	OTHER CHARGES —*cont.*			TOTAL Expenditure excluding Repayment of Loans and Interest and deducting Profit Recoupments.	LOANS.	PROFIT RECOUPMENTS.	
	Other Expenditure debited to this Establishment, except Loan Account.	TOTAL.	TOTAL of "Other Charges" after deducting the Profit Recoupments.		Repayment of Principal and Interest on Loans for this Building.	Net Farm Profit or Labour Profit.	From Sale of Stores, Waste, &c.
	27.	28.	29.	30.	31.	32.	33.
INFIRMARIES AND SICK ASYLUMS.	£	£	£	£	£	£	£
1. St. Saviour's	90	7,964	7,915	21,442	1,999	–	49
2. Holborn	72	7,576	7,556	18,099	5,300	–	20
3. Whitechapel	89	7,501	7,510	16,569	156	–	51
4. Lambeth	130	9,290	9,214	19,101	4,634	–	76
5. St. George's	420	8,454	8,421	17,784	6,343[a]	–	33
6. City of London	393	8,506	8,392	15,812	188	–	114
7. Shoreditch	13	6,347	6,292	14,417	617[b]	–	55
8. Poplar and Stepney Sick Asylum District	489	10,304	10,256	19,718	4,017	–	48
9. Marylebone (open part of year only.)	546	7,871	7,788	17,729	6,788	–	83
10. Kensington	182	8,398	8,361	16,418	1,618[c]	–	37
11. Hackney	21	6,598	6,465	14,040	1,263	–	133
12. Wandsworth and Clapham	–	5,721	5,675	12,022	2,280	–	46
13. Central London Sick Asylum District, Highgate	253	9,181	9,132	17,719	3,743	–	49
14. St. Olave's	72	6,286	6,252	12,239	2,241	–	34
15. Chelsea	6	5,135	5,032	9,964	2,039	–	103
16. St. George-in-the-East	181	4,030	4,593	8,394	1,976	–	37
17. Greenwich	33	4,799	4,735	9,013	2,679	–	64
18. Camberwell	18	3,997	3,966	7,857	1,356	–	31
19. Central London Sick Asylum District, Cleveland Street	236	5,201	5,192	9,243	1,542	–	9
20. Woolwich	49	3,738	3,723	6,856	1,546	–	15
TOTAL (excluding Islington Infirmary, see note (d))	3,293	137,557	136,470	284,436	52,325	–	1,087
IMBECILE ASYLUMS.							
1. Metropolitan Asylum District, Caterham	1,231	22,540	21,571	57,323	10,385	382	587
2. Do. Leavesden	542	19,031	18,274	49,025	9,642	664	93
3. Do. Darenth[e] Asylum for Adults	571	13,510	13,487	32,532	15,551	–	23
4. Do. for Children							
TOTAL	2,344	55,081	53,332	138,880	35,578	1,046	703
HOSPITALS. [f]							
1. Metropolitan Asylum District, Deptford Small-pox	815	24,338	24,272	34,205	4,202	–	66
2. Do. Homerton Fever	819	31,857	31,777	47,086	5,124	–	80
3. Do. Homerton Small-pox							
4. Do. Stockwell Fever	163	7,179	7,146	11,343	5,420[g]	–	33
5. Do. Fulham Small-pox	275	7,413	7,347	11,282	4,202	–	66
6. Do. Stockwell Small-pox	171	6,056	6,020	9,369	–[g]	–	36
TOTAL	2,243	76,843	76,562	113,285	18,948	–	281

[a] Approximate apportionment.
[b] Interest only. Repayments of principal are met by Sale of Property Account.
[c] Including 461*l.*, proportion of interest paid prior to the completion of the purchase on the amount of the purchase money of the premises recently added to the infirmary.
[d] The items in respect of the infirmary and the workhouse at Islington cannot be given separately. For the totals for the two establishments see the Return similar to this relating to Metropolitan Workhouses.
[e] The treatment for a time of small-pox patients on the site at Darenth rendered it necessary for these two asylums to be administered from one source, consequently separate returns cannot be made.
[f] Excluding Hampstead Hospital, which was not open during this year, and also the temporary "Atlas" Small-pox Hospital Ship and the Darenth Small-pox Convalescent Camp.
[g] The amount in respect of the Small-pox Hospital is included in the entry in respect of the Fever Hospital.

ANALYSIS of the RETURN of EXPENDITURE during the Year ended LADY-DAY 1882 at the METROPOLITAN INFIRMARIES, ASYLUMS, and HOSPITALS.

UNION or PARISH to which the Infirmary belongs, or DISTRICT to which the Asylum or Hospital belongs. (*Arranged according to the Total Cost per head.*) 1.	Average Number of Inmates maintained daily during the Year.* 2.	PROVISIONS. Total. 3.	PROVISIONS. Cost per Head. 4.	NECESSARIES. Total. 5.	NECESSARIES. Cost per Head. 6.	CLOTHING. Total. 7.	CLOTHING. Cost per Head. 8.	OTHER CHARGES. Total (Excluding Loans and deducting Profit Recoupments.) 9.	OTHER CHARGES. Cost per Head. 10.	TOTAL EXPENDITURE during the Year. 11.	TOTAL Cost per Head per Annum. 12.
INFIRMARIES AND SICK ASYLUMS.		£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
1. Central London Sick Asylum District, Cleveland Street	184·5	3,007	16 6 0	857	4 12 11	187	0 3	5,192	9	9,243	1 11
2. Central London Sick Asylum District, Highgate	364·4	6,131	16 16 6	2,044	5 12 2	412	1 2 7	9,132	25 1 2	17,719	48 12 5
3. Poplar and Stepney Sick Asylum District	469·1	6,844	14 11 10	2,064	4 8 0	554	1 3 7	10,256	21 17 3	19,718	42 0 8
4. Greenwich	219·7	3,156	14 7 4	893	4 1 3	229	1 0 10	4,735	21 11 0	9,013	41 0 5
5. Kensington	421·6	5,763	13 13 5	1,902	4 10 3	392	- 18 7	8,361	19 16 8	16,418	38 18 10
6. Woolwich	176·3	2,166	12 5 9	833	4 14 6	134	- 15 2	3,723	21 2 4	6,856	38 17 9
7. Camberwell	208·5	3,068	14 14 4	720	3 9 1	103	- 9 10	3,966	19 0 5	7,857	37 13 8
8. Chelsea	266·1	3,505	13 3 5	1,063	3 19 11	364	1 7 4	5,032	18 18 2	9,964	37 8 11
9. St. Olave's	329·6	4,710	14 5 10	1,119	3 7 11	158	- 9 7	6,252	18 19 4	12,239	37 2 8
10. St. George-in-the-East	232·3	2,383	10 5 2	1,154	4 19 4	264	1 2 9	4,593	19 15 5	8,394	36 2 8
11. Hackney	402·8	5,227	12 19 6	1,713	4 5 1	635	1 11 6	6,465	16 1 0	14,040	34 17 1
12. St. George's	532·7	6,664	12 10 2	2,239	4 4 1	460	- 17 3	8,421	15 16 2	17,874	33 7 8
13. Lambeth	592·0	7,498	12 13 4	1,846	3 2 4	543	- 18 4	9,214	15 11 3	19,101	32 5 4
14. City of London	509·9	5,452	10 13 10	1,455	2 17 1	513	1 0 1	8,392	16 9 2	15,812	31 0 2
15. Wandsworth and Clapham	393·0	4,849	12 6 9	1,201	3 1 2	297	- 15 1	5,675	14 8 10	12,022	30 11 10
16. Shoreditch	472·2	6,331	13 8 2	1,291	2 14 8	503	1 1 4	6,292	13 6 6	14,417	30 10 8
17. Holborn	644·7	7,669	11 17 11	2,521	3 18 2	353	- 10 11	7,556	11 14 5	18,099	28 1 6
18. Whitechapel	601·1	6,334	10 10 9	1,943	3 4 8	782	1 6 0	7,510	12 9 11	16,569	27 11 4
19. St. Saviour's	969·3	10,619	10 19 1	2,068	2 2 8	840	- 17 4	7,915	8 3 4	21,442	22 2 5
TOTAL or AVERAGE (excluding Marylebone* and Islington Infirmaries)	7,989·8	101,376	12 13 9	28,926	3 12 5	7,723	- 19 4	128,682	16 2 1	266,707	33 7 7
20. St. Marylebone (275 days)	577·6	5,461	12 10 3	2,604	5 19 4	1,879	4 5 11	7,788	17 16 10	17,729	40 12 5

* Dividing the numbers in column 2 of page 237 by 364.

* The expenditure at Marylebone, relating to part only of the year, cannot properly be included in calculating the metropolitan average cost per head per annum.

ANALYSIS of the RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Infirmaries, Asylums, and Hospitals—*continued.*

UNION or PARISH to which the Infirmary belongs, or DISTRICT to which the Asylum or Hospital belongs. (*Arranged according to the Total Cost per Head.*) 1.	Average Number of Inmates maintained daily during the Year.* 2.	PROVISIONS. Total. 3.	PROVISIONS. Cost per Head. 4.	NECESSARIES. Total. 5.	NECESSARIES. Cost per Head. 6.	CLOTHING. Total. 7.	CLOTHING. Cost per Head. 8.	OTHER CHARGES. Total. 9.	OTHER CHARGES. Cost per Head. 10.	TOTAL EXPENDITURE during the Year. 11.	TOTAL Cost per Head per Annum. 12.
								(Excluding Loans and deducting Profit Recoupments.)			
IMBECILE ASYLUMS.		£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
1. Metropolitan Asylum District, Darenth Asylum for Adults	721·5	10,796	14 19 3	4,680	6 9 9	3,569	4 18 11	13,487	18 13 10	32,532	45 1 9
2. Do. Do. for Children	1,996·8	24,248	12 2 10	4,414	2 4 3	7,090	3 11 0	21,571	10 16 1	57,323	28 14 2
3. Metropolitan Asylum District, Caterham	1,992·6	21,229	10 13 1	4,497	2 5 2	5,025	2 10 5	18,274	9 3 5	49,025	24 12 1
4. Do. do. Leavesden											
TOTAL or AVERAGE	4,710·9	56,273	11 18 11	13,591	2 17 8	15,684	3 6 7	53,332	11 6 5	138,880	29 9 7
HOSPITALS.											
1. Metropolitan Asylum District, Homerton Small-pox	257·7	6,835	26 10 6	3,880	15 1 2	4,594	17 16 6	31,777	123 6 2	47,086	182 14 4
2. Do. do. Homerton Fever											
3. Do. do. Deptford Small-pox	268·8	4,834	18 2 4	3,699	13 17 3	1,400	5 4 11	24,272	90 19 6	34,205	128 4 0
4. Do. do. Stockwell Small-pox	83·7	1,896	22 13 1	1,179	14 1 9	274	3 5 6	6,020	71 18 6	9,369	111 18 9
5. Do. do. Fulham Small-pox	114·8	1,818	15 16 9	1,324	11 10 8	793	6 18 2	7,347	64 0 0	11,282	98 5 6
6. Do. do. Stockwell Fever	154·9	2,663	17 3 10	1,323	8 10 10	211	1 7 3	7,146	46 2 8	11,343	73 4 7
TOTAL or AVERAGE	877·9	18,046	20 11 1	11,405	12 19 10	7,272	8 5 8	76,562	87 4 2	113,285	129 0 10

* Dividing the numbers in column 2 of page 237 by 364.

Appendix E.

Education of Pauper Children. Expenditure in Metropolitan District and Separate Schools. Employment of Children sent from Pauper Schools. Boarding-out Committees.

	Page
No. 73. Daily Average Attendance at School during the Half-year ended Lady-day 1882 - - - - - - - - -	244
No. 74. Schools certified for the reception of Children under the Act 25 & 26 Vict. cap. 43. - - - - - -	267
No. 75. Expenditure during the Year ended at Lady-day 1882, at the Metropolitan District and Separate Schools -	268
No. 76. Average Prices Paid, during the Year ended at Lady-Day 1882, for various Articles used in the Metropolitan Schools	273
No. 77. Nature of Employments in which Children from Metropolitan Pauper Schools were placed during the Year 1882 - - - - - - - - -	277
No. 78. List of Boarding-out Committees authorised to act -	281

No. 73.

STATEMENT showing the daily Average Number of Children attending the Schools of the Union Workhouses &c. in England and Wales during the Half-year ended at Lady-day 1882, the Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of the Schoolmasters and Schoolmistresses for the year ended at Lady-day 1882, and also the Population of each Union in 1881.

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
	I. THE METROPOLIS.									£ s. d.	
	1.* MIDDLESEX (part of).										
1*a*	Kensington - - -	162,924	..	..	..	..	..	..	..	..	In Kensington and Chelsea District School.
1*b*	Fulham - - - -	114,811	..	..	..	..	..	..	..	..	In West London District School.
1*c*	Paddington - - -	107,098	..	..	..	..	..	..	..	..	Ditto.
2	Chelsea - - - -	88,101	..	..	..	..	..	..	..	..	In Kensington and Chelsea District School.
3	St. George's - - -	149,603	..	..	..	..	..	..	..	..	In West London District School.
4	Westminster - - -	46,456	32	68	100	29	51	80	180	228 2 1	In a separate School at Tooting.
5	St. Marylebone - -	155,004	135	102	237	88	82	170	407	528 15 1	In a separate School at Southall.
6	Hampstead - - -	45,436	..	..	..	..	..	..	..	..	In separate Schools.
7	St. Pancras - - -	236,209	113	240	353	92	168	260	613	555 14 0	Children at Leavesden.
8	Islington - - - -	282,628	103	103	206	76	85	161	367	398 5 3	In a separate School at Holloway.
9	Hackney - - - -	186,400	..	..	..	..	..	..	..	..	In Brentwood District School.
10	St. Giles and St. George, Bloomsbury.	45,257	..	..	..	..	..	..	..	..	In School at Edmonton.
11	Strand - - - -	33,419	78	107	185	68	81	149	334	538 11 7	In School at Edmonton.
12	Holborn - - - -	151,716	169	129	298	112	111	223	521	479 5 2	In School at Mitcham.
13	City of London - - -	51,401	..	..	..	..	..	..	..	..	In Central London District School.
14	Shoreditch - - -	126,565	..	..	..	..	..	..	..	..	In Brentwood District School.
15	Bethnal Green - - -	127,006	52	48	100	33	40	73	173	409 2 2	In Schools at Mitcham and Leytonstone.
16	Whitechapel - - -	71,350	..	..	..	..	..	..	..	..	In Forest Gate District School.
17	St. George-in-the-East -	47,011	62	68	130	70	58	128	258	444 15 2	In a separate School at Plashet.

NOTE.—Places marked in the Table thus * are single parishes under the Poor Law Amendment Act; ‖ are single parishes under Local Acts; † are incorporations under Local Acts.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
	I. THE METROPOLIS—*cont.*									£ s. d.	
	1.* MIDDLESEX (pt. of)—*cont.*										
18	Stepney	58,500	..	..	..	..	..	..	..	..	In South Metropolitan District School.
19	Mile End Old Town	105,573	63	70	133	95	39	134	267	322 15 4	In a separate School.
20	Poplar	156,525	..	..	..	..	..	..	..	..	In Forest Gate District School.
	2.* SURREY (part of).										
21	St. Saviour, Southwark	195,111	..	..	..	..	..	..	..	..	In Central London District School.
22	St. Olave, Southwark	134,586	32	20	52	31	9	40	92	66 10 0	In temporary School. Other children in South Metropolitan District School.
23	Lambeth	253,569	169	175	344	118	164	282	626	491 17 8	In a separate School at Norwood.
24	Wandsworth and Clapham	210,397	..	..	..	..	..	..	..	..	In North Surrey District School.
25	Camberwell	186,555	..	..	..	..	..	..	..	..	In South Metropolitan District School.
	3.* KENT (part of).										
26	Greenwich	131,264	..	..	..	..	..	..	..	24 0 0	In South Metropolitan District School. This sum paid for Temporary School.
27	Lewisham	73,314	..	..	..	..	..	..	..	..	In North Surrey District School.
28	Woolwich	80,782	..	..	..	..	..	..	..	..	In South Metropolitan District School.
	II. SOUTH EASTERN COUNTIES.										
	2.* SURREY (extra-metropolitan).										
29	Epsom	41,101	15	13	28	27	7	34	62	24 0 0	
30	Chertsey	27,046	14	16	30	11	6	17	47	76 8 0	
31	Guildford	42,670	5	..	5	5	..	5	10	17 12 0	Elder children sent to National School.
32	Farnham	40,275	..	..	..	..	..	..	..	..	In Farnham and Hartley Wintney District School.
33	Hambledon	16,353	..	..	..	..	..	..	..	..	Sent out to School.
34	Dorking	15,460	9	9	18	6	8	14	32	60 0 0	
35	Reigate	30,352	8	5	13	7	7	14	27	29 2 0	
36	Godstone	17,692	12	8	20	9	4	13	33	15 12 0	
37	Croydon	119,161	..	..	..	..	..	..	..	..	In North Surrey District School.
38	Kingston	77,059	..	..	..	..	..	..	..	..	In School at Cowley.
39	Richmond	33,630	..	..	..	..	..	..	..	..	In North Surrey District School.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
II. SOUTH EASTERN COUNTIES—*cont.*										£ s. d.	
	3.* KENT (extra-metropolitan).										
40	Bromley	48,924	14	8	22	11	7	18	40	18 17 0	
41	Dartford	53,428	..	..	..	..	..	..	..	..	Sent out to School.
42	Gravesend and Milton	23,375	8	14	22	..	..	..	22	33 14 0	Girls sent out to School.
43	North Aylesford	27,193	12	9	21	11	10	21	42	51 4 0	
44	Hoo	3,397	..	..	..	..	..	..	..	..	Sent to National School.
45	Medway	61,676	40	35	75	58	30	88	163	128 5 0	
46	Malling	26,002	..	..	..	..	..	..	..	15 0 0	Now sent to National School.
47	Seven Oaks	27,199	11	10	21	10	7	17	38	39 8 4	
48	Tonbridge	51,532	24	34	58	40	19	59	117	94 15 0	In a separate Building.
49	Maidstone	45,105	23	43	66	44	33	77	143	129 10 0	Ditto.
50	Hollingbourn	14,040	4	12	16	18	5	23	39	55 17 0	
51	Cranbrook	13,773	7	12	19	5	5	10	29	52 13 4	
52	Tenterden	10,461	..	..	..	..	..	..	..	..	Sent to National School.
53	West Ashford	18,126	8	10	18	5	5	10	28	16 0 0	
54	East Ashford	13,690	4	7	11	10	3	13	24	40 16 0	
55	Bridge	12,404	15	7	22	8	10	18	40	20 14 7	
56	Canterbury †	17,058	..	..	..	..	..	..	..	..	Sent to National School.
57	Blean	18,855	8	8	16	11	7	18	34	49 14 8	
58	Faversham	24,974	13	12	25	17	14	31	56	61 15 0	
59	Milton	23,265	10	15	25	8	5	13	38	47 1 8	
60	Sheppey	18,185	17	20	37	19	21	40	77	74 6 0	
61	Thanet	50,646	21	30	51	33	14	47	98	78 0 0	
62	Eastry	27,994	16	7	23	12	6	18	41	66 9 4	
63	Dover	36,990	25	36	61	37	24	61	122	105 12 2	
64	Elham	33,684	12	14	26	19	10	29	55	43 6 8	
65	Romney Marsh	5,960	..	..	..	..	..	..	..	..	Sent to National School.
	4. SUSSEX.										
66	Rye	12,056	5	7	12	4	5	9	21	40 0 0	
67	Hastings	50,126	9	14	23	25	11	36	59	61 5 0	
68	Battle	14,508	6	21	27	12	3	15	42	19 0 0	
69	Eastbourne	27,617	12	4	16	8	7	15	31	21 7 0	
70	Hailsham	13,413	9	6	15	5	7	12	27	45 4 11	
71	Ticehurst	17,219	10	6	16	6	6	12	28	34 14 8	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1883.	Observations.
			Boys.			Girls.			Total Boys and Girls.	
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.		
	II. SOUTH EASTERN COUNTIES—*cont.*								£ s. d.	
	4. SUSSEX—*continued.*									
72	Uckfield	20,099	5	6	11	5	6	11	22	31 7 7	
73	East Grinstead	18,581	6	13	19	10	13	23	42	42 0 0	In a separate Building.
74	Cuckfield	23,248	10	17	27	8	7	15	42	44 11 6	
75*a*	Chailey	10,373	3	5	8	2	1	3	11	25 5 0	
75*b*	Lewes	11,547	5	12	17	3	5	8	25	40 0 0	In a separate Building.
75*c*	West Firle	2,369	..	..	..	..	..	..	..	..	Sent out to School.
75*d*	Newhaven	8,635	..	..	..	..	..	..	..	..	Ditto.
76	Brighton ‖	99,074	109	65	174	76	52	128	302	320 3 2	In a separate School at Warren Farm.
77	Steyning	49,078	..	..	..	..	..	..	..	16 0 0	Sent out to School. These sums paid for Industrial Teaching.
78	Horsham	22,300	..	..	..	..	..	..	..	12 0 0	
79	Petworth	9,563	6	8	14	2	2	4	18	32 9 4	In separate Schools at Wisborough Green.
80	Thakeham	8,295	2	2	4	7	1	8	12	43 6 0	
81	East Preston	26,364	14	4	18	6	3	9	27	25 10 0	In a separate Building.
82	West Hampnett	19,638	8	5	13	7	11	18	31	61 17 9	
83	Chichester †	8,547	..	..	..	..	..	..	..	..	Sent out to School.
84	Midhurst	13,964	6	7	13	7	11	18	31	54 15 8	
85	Westbourne	7,413	8	..	8	4	3	7	15	24 18 0	
	5. SOUTHAMPTON.									
86	Havant	8,672	..	..	..	..	..	..	..	..	Sent to National School.
87	Portsea Island	127,986	94	130	224	78	84	162	386	361 1 1	
88	Alverstoke §	21,571	..	..	..	..	..	..	..	..	Sent to Portsea Island Union School.
89	Fareham	16,807	2	..	2	1	1	2	4	14 18 0	
90	Isle of Wight	73,652	29	23	52	28	21	49	101	171 7 10	
91	Lymington	12,625	2	3	5	1	..	1	6	23 3 0	
92	Christchurch	29,457	11	8	19	8	2	10	29	39 19 0	
93	Ringwood	5,488	3	3	6	7	2	9	15	19 12 1	
94	Fordingbridge	6,234	5	2	7	7	5	12	19	25 18 0	
95	New Forest	13,210	6	6	12	10	3	13	25	28 14 0	
96	Southampton †	53,173	25	26	51	23	15	38	89	195 19 4	In a separate Building.
97	South Stoneham	41,262	8	14	22	8	12	20	42	81 17 11	
98	Romsey	10,600	10	4	14	9	5	14	28	19 12 0	
99	Stockbridge	6,972	9	2	11	5	5	10	21	25 5 0	
100*a*	New Winchester	28,398	..	..	..	..	..	..	..	2 8 0	Now sent to Portsea Island Union School.
100*b*	Hursley	2,753	..	..	..	..	..	..	..	..	Sent to Village Schools.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882	Observations.
			Boys.			Girls.				
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.	Total Boys and Girls.	
									£ s. d.	
II. SOUTH EASTERN COUNTIES—*cont.*										
	5. SOUTHAMPTON—*cont.*									
101	Droxford	11,167	5	13	18	4	5	9	27	51 2 0	
102	Catherington	2,747	..	..	..	..	..	..	..	..	Sent to National School.
103	Petersfield	10,256	..	..	..	..	..	..	..	..	Sent to Board School.
104	Alresford	6,967	6	6	12	2	2	4	16	20 1 9	
105	Alton	15,199	..	..	..	..	..	..	..	..	In Farnham and Hartley Wintney District School.
106	Hartley Wintney	21,324	..	..	..	..	..	..	..	..	Ditto.
107	Basingstoke	19,249	14	13	27	21	4	25	52	66 13 4	
108	Whitchurch	5,458	..	..	..	..	..	..	..	..	Sent to National School.
109	Andover	15,700	..	..	..	..	..	..	..	14 0 0	Sent to National Schools. These sums paid for Industrial Teaching.
110	Kingsclere	8,525	..	..	..	..	..	..	..	13 6 8	
	6. BERKS.										
111	Newbury	21,326	6	7	13	14	20	34	47	53 6 8	
112	Hungerford	17,795	..	..	..	..	..	..	..	7 13 2	Sent to National Schools. These sums paid for Industrial Teachers.
113	Faringdon	13,676	..	..	..	..	..	..	..	12 0 0	
114	Abingdon	20,354	..	..	..	..	..	..	..	50 0 0	
115	Wantage	17,161	7	8	15	8	7	15	30	30 10 0	
116	Wallingford	14,493	5	15	20	8	5	13	33	34 18 0	
117	Bradfield	17,972	16	8	24	6	7	13	37	74 1 1	
118	Reading	43,485	..	..	..	..	..	..	..	..	In Reading and Wokingham District School.
119	Wokingham	20,015	..	..	..	..	..	..	..	..	Ditto.
120	Cookham	16,934	7	10	17	13	9	22	39	64 12 0	Now in a separate building.
121	Easthampstead	12,663	..	..	..	..	..	..	..	..	Sent to National School.
122	Windsor	32,064	16	..	16	11	5	16	32	20 0 0	Boys above 10 now go to National School.
III. SOUTH MIDLAND COUNTIES.											
	1.* MIDDLESEX (extra-metropolitan).										
123	Staines	23,782	16	14	30	16	21	37	67	81 15 0	
124	Uxbridge	27,550	1	..	1	3	2	5	6	19 0 0	Elder children and orphans sent out to School.
125	Brentford	101,679	52	17	69	29	4	33	102	22 12 0	
126	Hendon	54,412	36	25	61	26	15	41	102	138 15 0	In a separate School at Edgware.
127	Barnet	34,074	..	..	..	..	..	..	..	..	Sent to Edgware in the Hendon Union.
128	Edmonton	139,188	22	38	60	51	50	101	161	274 0 3	In a separate School at Enfield.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.	
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.		
									£ s. d.	
III. SOUTH MIDLAND COUNTIES—*cont.*										
	7. HERTFORD.									
129	Ware	18,624	7	12	19	11	8	19	38	44 12 0	
130	Bishop's Stortford	21,799	3	4	7	20	9	29	36	51 3 4	
131*a*	Buntingford	6,032	..	..	..	..	..	..	..	..	Sent to National School.
131*b*	Royston	18,621	14	20	34	19	7	26	60	35 2 0	
132	Hitchin	27,417	10	8	18	8	20	28	46	23 2 9	
133	Hertford	16,754	14	12	26	11	10	21	47	28 1 0	
134*a*	Hatfield	6,502	..	..	..	..	..	..	..	..	Sent to National School.
134*b*	Welwyn	2,300	..	..	..	..	..	..	..	..	Ditto.
135	St. Albans	23,294	15	7	22	4	2	6	28	30 3 0	
136	Watford	31,276	14	19	33	22	18	40	73	61 15 0	
137	Hemel Hempstead	14,606	..	..	..	..	..	..	..	..	Sent to National and Board Schools.
138	Berkhampstead	15,090	..	..	..	..	..	..	..	..	Ditto.
	8. BUCKINGHAM.									
139	Amersham	18,314	7	9	16	11	9	20	36	59 7 0	
140	Eton	27,738	5	7	12	10	3	13	25	18 16 0	
141	Wycombe	40,284	15	18	33	16	19	35	68	62 13 4	In a separate School at Bledlow.
142	Aylesbury	24,606	17	10	27	9	4	13	40	23 18 8	
143	Winslow	7,942	9	3	12	6	3	9	21	19 12 0	
144	Newport Pagnell	24,582	..	..	..	9	21	30	30	22 0 0	Boys sent out to School.
145	Buckingham	12,419	..	..	..	..	..	..	..	..	Sent to National School.
	9. OXFORD.									
146	Henley	19,996	19	30	49	25	24	49	98	91 1 0	
147	Thame	13,862	..	..	..	..	..	..	..	..	Sent to National School.
148	Headington	28,717	..	..	..	..	..	..	..	..	Sent out to School.
149	Oxford†	21,900	54	55	109	18	23	41	150	118 19 6	In a separate School at Cowley.
150	Bicester	14,156	..	..	..	..	..	..	..	..	Sent to National School.
151	Woodstock	13,320	..	..	..	..	..	..	..	..	Sent to Schools in Town.
152	Witney	21,534	6	16	22	6	27	33	55	45 6 7	
153	Chipping Norton	17,958	7	9	16	6	9	15	31	27 15 0	
154	Banbury	30,121	..	..	..	..	..	..	..	73 1 0	Boys and Girls sent out to School.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and School-mistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
	III. SOUTH MIDLAND COUNTIES—*cont.*									£ s. d.	
	10. NORTHAMPTON.										
155	Brackley	12,338	..	..	..	..	..	..	..	10 6 0	Now sent out to School.
156	Towcester	12,584	6	11	17	8	6	14	31	23 6 9	
157	Potterspury	12,230	8	4	12	5	5	10	22	19 6 0	
158	Hardingstone	10,481	9	3	12	3	4	7	19	19 16 0	
159	Northampton	64,244	24	26	50	26	24	50	100	84 0 0	In a separate Building.
160	Daventry	18,511	7	6	13	8	3	11	24	22 0 0	
161	Brixworth	13,336	..	..	..	..	..	..	..	..	Sent out to School.
162	Wellingborough	36,944	6	7	13	9	2	11	24	40 16 0	
163	Kettering	25,651	14	13	27	9	9	18	45	20 0 0	
164	Thrapston	15,117	..	..	..	..	..	..	..	..	No repayment.
165	Oundle	14,081	13	4	17	11	8	19	36	28 0 0	
166	Peterborough	41,485	12	15	27	14	6	20	47	62 9 0	
	11. HUNTINGDON.										
167	Huntingdon	19,560	23	5	28	30	13	43	71	48 0 0	In a detached Building.
168	St. Ives	16,752	7	8	15	11	7	18	33	29 12 0	In a detached Building.
169	St. Neot's	16,906	15	10	25	15	6	21	46	48 0 0	
	12. BEDFORD.										
170	Bedford	42,931	18	22	40	15	21	36	76	136 13 0	
171	Biggleswade	27,375	6	6	12	3	5	8	20	26 18 0	
172	Ampthill	16,254	9	4	13	2	2	4	17	26 10 0	
173	Woburn	9,878	7	3	10	6	6	12	22	21 8 0	
174	Leighton Buzzard	18,316	5	16	21	9	5	14	35	31 11 0	
175	Luton	39,495	..	..	..	..	..	..	..	..	Sent to National School.
	13. CAMBRIDGE.										
176	Caxton and Arrington	10,357	10	8	18	3	11	14	32	41 6 8	In a detached Building.
177	Chesterton	29,043	14	17	31	19	14	33	64	99 8 0	
178	Cambridge	35,372	18	10	28	18	7	25	53	52 6 11	
179	Linton	18,014	12	12	24	9	10	19	43	40 0 0	
180	Newmarket	28,254	11	9	20	13	10	23	43	47 17 6	
181	Ely	20,703	..	..	..	..	..	..	..	..	Sent to National School.
182	North Witchford	15,464	17	13	30	17	8	25	55	46 4 0	
183	Whittlesey*	6,454	..	..	..	..	..	..	..	..	Sent to National School.
184	Wisbeach	32,462	15	10	25	23	18	41	66	96 12 4	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.				
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.	Total Boys and Girls.	
	IV. EASTERN COUNTIES.								£ s. d.	
	14. ESSEX.									
185	West Ham	200,752	96	96	192	72	67	139	331	352 1 4	In a separate building.
186	Epping	21,755	..	..	..	..	..	..	..	..	Sent to National School & Chelmsford Workhouse School.
187	Ongar	10,669	20	9	29	2	7	9	38	30 10 0	
188	Romford	36,889	..	..	..	23	13	36	36	40 0 0	Boys sent to Board Schools.
189	Orsett	16,356	1	..	1	4	1	5	6	17 0 0	Orphans, &c. boarded out.
190	Billericay	18,437	..	..	..	..	..	..	..	11 10 0	Now sent to Board School.
191	Chelmsford	32,972	7	26	33	12	2	14	47	56 17 0	
192	Rochford	24,329	..	..	..	..	..	..	..	..	Sent to Board Schools.
193	Maldon	23,809	12	11	23	16	12	28	51	73 13 0	
194	Tendring	33,382	14	12	26	12	10	22	48	36 0 0	
195	Colchester	28,395	15	11	26	18	11	29	55	48 18 8	
196	Lexden and Winstree	21,808	13	17	30	14	10	24	54	56 15 0	
197 198	Halstead	17,005	..	..	..	..	..	..	..	..	Sent out to School.
199	Braintree	28,629	5	22	27	34	18	52	79	50 16 4	
200	Dunmow	17,990	8	20	28	19	16	35	63	90 4 5	
201	Saffron Walden	18,588	..	..	..	..	..	..	..	..	Sent out to School.
	15. SUFFOLK.									
202	Risbridge	17,234	13	5	18	13	10	23	41	30 16 0	
203	Sudbury	30,151	..	..	..	..	..	..	..	..	No School.
204	Cosford	15,820	5	10	15	12	5	17	32	57 14 0	
205	Thingoe	16,382	9	16	25	33	9	42	67	43 18 0	
206	Bury St. Edmund's†	16,211	..	..	..	..	..	..	..	..	No School.
207	Mildenhall	8,948	..	..	..	..	..	..	..	..	Sent out to School.
208	Stow	20,181	12	11	23	20	7	27	50	34 14 0	
209	Hartismere	15,790	19	33	52	20	30	50	102	130 16 0	In School at Wortham.
210	Hoxne	12,601	..	..	..	..	..	..	..	..	No School.
211	Bosmere and Claydon	15,401	2	..	2	8	6	14	16	29 0 0	
212	Samford	11,596	..	..	..	..	..	..	..	..	Sent out to School.
213	Ipswich	50,323	41	46	87	37	24	61	148	247 13 4	In school at St. John's Workhouse.
214	Woodbridge	22,748	7	7	14	7	6	13	27	20 12 0	
215	Plomesgate	20,414	13	5	18	13	4	17	35	20 0 9	
216	Blything	25,805	10	9	19	19	7	26	45	40 1 0	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Unions from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1883.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
IV. EASTERN COUNTIES—*continued.*										£ s. d.	
	15. SUFFOLK—*continued.*										
217	Wangford	14,456	..	..	..	..	..	..	..	..	No School.
218	Mutford and Lothingland†	39,448	16	16	32	7	9	16	48	36 0 0	
	16. NORFOLK.										
219	Yarmouth *	37,213	..	..	..	..	..	..	..	..	Sent out to School.
220	Flegg, East and West†	9,700	4	3	7	1	4	5	12	23 0 0	
221	Smallburgh	14,328	12	11	23	7	6	13	36	32 19 0	
222	Erpingham	20,232	6	12	18	14	4	18	36	50 0 0	
223	Aylsham	18,056	18	12	30	18	4	22	52	52 15 0	
224	St. Faith's	11,414	5	13	18	3	5	13	31	27 4 0	
225	Norwich	87,843	28	27	55	29	21	50	105	128 16 2	Partly in separate Schools and partly in Workhouse School.
226	Forehoe†	11,970	..	..	..	14	5	19	19	20 8 0	Boys sent out to School.
227	Henstead	10,636	8	6	14	7	4	11	25	22 8 0	
228	Blofield	11,622	10	3	13	13	7	20	33	27 7 0	
229	Loddon and Clavering	13,702	16	14	30	16	7	23	53	45 7 11	
230	Depwade	23,583	11	13	24	14	11	25	49	45 16 0	
231	Guiltcross	10,563	..	..	..	..	..	..	..	..	Sent out to School.
232	Wayland	10,708	5	1	6	1	1	2	8	18 4 0	
233	Mitford and Launditch	27,367	11	7	18	12	5	17	35	38 12 11	
234	Walsingham	19,940	6	8	14	4	4	8	22	28 8 0	
235	Docking	17,509	..	..	..	..	..	..	..	..	Sent out to School.
236	Freebridge Lynn	12,234	5	2	7	6	2	8	15	10 15 5	
237	King's Lynn	19,143	9	10	19	16	10	26	45	39 10 0	
238	Downham	19,398	..	..	..	..	..	..	..	12 0 0	Sent out to School. This sum paid for Industrial Teaching.
239	Swaffham	12,859	..	..	..	..	..	..	..	..	Sent out to School.
240	Thetford	17,629	..	..	..	..	..	..	..	..	Ditto.
V. SOUTH WESTERN COUNTIES.											
	17. WILTS.										
241	Highworth and Swindon	35,736	..	..	..	..	..	..	..	16 13 4	Sent to National School. This sum paid for an Industrial Trainer.
242	Cricklade and Wootton Bassett.	11,283	..	..	..	..	..	..	..	..	Sent to National School.
243	Malmesbury	13,951	11	8	19	5	3	8	27	23 0 0	
244	Cluppenham	21,226	..	..	..	16	8	24	24	35 15 0	Boys sent to National School.
245	Calne	8,616	..	..	..	..	..	..	..	13 6 8	Sent to National School. This sum paid for an Industrial Trainer.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
V. SOUTH WESTERN COUNTIES—*cont.*										£ s. d.	
	17. WILTS—*continued.*										
246	Marlborough	9,733	..	..	..	..	..	..	..	..	Sent out to School.
247	Devizes	20,520	..	..	..	..	..	..	..	..	Sent to National School.
248	Melksham	18,079	17	9	26	19	10	29	55	53 18 8	
249	Bradford	10,860	14	6	20	5	5	10	30	47 6 11	In a separate Building.
250	Westbury and Whorwelsdown.	10,651	7	7	14	4	3	7	21	37 10 0	
251	Warminster	13,840	..	..	..	..	..	..	..	..	Sent to National School.
252	Pewsey	12,404	3	5	8	3	6	9	17	25 0 7	
253	Amesbury	7,622	6	5	11	9	5	14	25	58 16 0	
254	Alderbury	27,225	17	14	31	12	5	17	48	64 13 4	In a separate Building.
255	Wilton	10,244	..	..	..	..	..	..	..	..	Sent to National School.
256	Tisbury	9,306	..	..	..	..	..	..	..	..	Ditto.
257	Mere	7,348	..	..	..	..	..	..	..	..	Ditto.
	18. DORSET.										
258	Shaftesbury	12,663	9	10	19	9	6	15	34	46 16 0	
259	Sturminster	10,052	9	3	12	3	3	6	18	31 10 0	
260	Blandford	13,735	8	6	14	6	3	9	23	39 0 0	
261	Wimborne and Cranborne	16,990	16	7	23	8	6	14	37	27 10 0	
262	Poole	18,695	13	7	20	2	2	4	24	28 8 0	
263	Wareham and Purbeck	16,946	10	4	14	7	1	8	22	26 16 0	
264	Weymouth	31,995	..	..	..	..	..	..	..	13 6 8	Sent out to School. This sum paid for an Industrial Trainer.
265*a*	Dorchester	18,395	12	8	20	14	8	22	42	31 11 3	
265*b*	Cerne	6,496	..	..	..	..	..	..	..	..	Sent to National School.
266	Sherborne	12,696	..	..	..	..	..	..	..	..	Sent out to School.
267	Beaminster	11,474	6	2	8	11	3	14	22	17 19 0	
268	Bridport	14,799	15	6	21	6	2	8	29	18 0 0	
	19. DEVON.										
269	Axminster	18,764	..	..	..	..	..	..	..	10 13 4	Sent to Board School. This sum paid for an Industrial Trainer.
270	Honiton	21,081	14	5	19	15	5	20	39	31 11 0	
271	St. Thomas	48,221	11	11	22	9	7	16	38	78 10 8	
272	Exeter	37,608	..	..	..	..	..	..	..	30 0 0	Sent out to School. This sum paid for Industrial Training.
273	Newton Abbot	74,989	28	17	45	30	17	47	92	94 6 4	
274	Totnes	36,675	21	16	37	20	12	32	69	65 3 0	
275	Kingsbridge	18,542	7	13	20	7	7	14	34	42 19 4	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION-COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.	
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.		
	V. SOUTH WESTERN COUNTIES—*cont.*									£ s. d.	
	19. DEVON—*continued.*										
276	Plympton St. Mary - -	24,181	7	14	21	7	8	15	36	23 4 0	
277	Plymouth † - - -	75,096	26	26	52	36	18	54	106	110 0 0	
278	East Stonehouse * - -	15,125	8	3	11	7	2	9	20	19 12 0	
279	Stoke Damerel ‖ - -	48,745	12	14	26	19	6	25	51	87 0 4	
280	Tavistock - - - -	29,139	7	8	15	12	5	17	32	41 15 0	
281	Okehampton - - -	16,962	10	3	13	16	3	19	32	34 0 0	
282	Crediton - - - -	17,929	11	5	16	12	3	15	31	29 18 0	
283	Tiverton - - - -	28,512	13	12	25	19	8	27	52	28 0 0	
284	South Molton - - -	16,818	6	11	17	12	5	17	34	42 17 6	
285	Barnstaple - - - -	38,193	13	12	25	18	6	24	49	72 17 0	The Boys School is in a separate Building.
286	Torrington - - -	14,818	7	8	15	5	7	12	27	22 12 0	
287	Bideford - - - -	18,752	12	2	14	11	3	14	28	16 1 0	
288	Holsworthy - - -	9,007	..	..	..	..	..	..	..	..	Sent to National School.
	20. CORNWALL.										
289	Stratton - - - -	7,442	8	3	11	6	2	8	19	18 17 0	
290	Camelford - - - -	7,605	7	2	9	6	..	6	15	20 0 0	
291	Launceston - - -	16,126	7	3	10	9	3	12	22	16 0 0	The School is in a separate Building.
292	St. Germans - - -	16,717	10	6	16	12	10	22	38	21 16 0	
293	Liskeard - - - -	28,786	19	11	30	6	14	20	50	71 6 8	
294	Bodmin - - - -	19,199	12	11	23	9	8	17	40	65 12 0	
295	St. Columb - - -	16,377	11	6	17	15	2	17	34	47 8 0	
296	St. Austell - - - -	30,187	12	13	25	12	16	28	53	63 11 3	
297	Truro - - - - -	35,873	9	8	17	20	8	28	45	73 15 0	
298	Falmouth - - - -	25,147	4	8	12	12	12	24	36	51 0 0	
299	Helston - - - -	23,688	12	6	18	18	3	21	39	24 0 0	
300	Redruth - - - -	46,121	14	9	23	19	12	31	54	74 14 0	
301	Penzance - - - -	49,622	6	5	11	6	6	12	23	25 10 0	
	21. SOMERSET.										
303	Williton - - - -	18,684	11	11	22	16	7	23	45	76 10 0	
304	Dulverton - - - -	5,453	6	2	8	1	1	2	10	24 0 0	
305	Wellington - - -	19,194	8	12	20	20	7	27	47	73 6 8	
306	Taunton - - - -	35,978	7	3	10	4	4	8	18	36 0 0	
307	Bridgwater - - -	33,652	..	..	..	..	..	..	..	..	Sent to Board School.
308	Langport - - -	15,574	10	6	16	7	5	12	28	21 16 0	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1883.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.				
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.	Total Boys and Girls.	
	V. SOUTH WESTERN COUNTIES—*cont.*								£ s. d.	
	21. SOMERSET—*continued.*									
309	Chard	25,349	..	..	..	..	..	..	..	Sent out to School.
310	Yeovil	27,695	12	6	18	7	3	10	28	17 10 3
311	Wincanton	19,770	13	12	25	21	26	47	72	54 11 11
312	Frome	23,161	11	24	35	14	6	20	55	79 4 0
313	Shepton Mallet	15,779	8	7	15	18	9	27	42	32 0 0
314	Wells	22,009	8	9	17	11	8	19	36	63 6 8
315	Axbridge	40,844	..	..	..	..	..	..	..	..
316	Clutton	23,646	11	10	21	7	9	16	37	33 6 0
317	Bath	70,603	59	32	91	38	15	53	144	193 13 10
318	Keynsham	25,782	9	3	12	5	3	8	20	55 19 8
319	Bedminster	67,331	45	27	72	49	18	67	139	112 13 4
	VI. WEST MIDLAND COUNTIES.									
	22. GLOUCESTER.									
320	Bristol†	57,499	36	57	93	28	13	41	134	283 14 7
321	Barton Regis	166,068	92	59	151	51	25	76	227	261 15 4
322	Chipping Sodbury	17,519	8	2	10	10	2	12	22	26 0 0
323	Thornbury	17,096	21	5	26	10	3	13	39	32 19 0
324	Dursley	12,550	..	..	..	..	..	..	..	..
325	Westbury-on-Severn	23,552	20	24	44	16	18	34	78	99 4 0
326	Newent	11,030	4	7	11	4	4	8	19	20 16 0
327	Gloucester	46,880	..	..	..	23	7	30	30	26 5 4
328	Wheatenhurst	7,349	..	..	..	..	..	..	..	..
329	Stroud	41,331	14	11	25	17	10	27	52	96 16 0
330	Tetbury	5,894	..	..	..	..	..	..	..	..
331	Cirencester	21,310	10	4	14	10	6	16	30	20 16 10
332	Northleach	9,884	2	5	7	2	2	4	11	46 9 8
333	Stow-on-the-Wold	9,129	..	..	..	..	..	..	..	..
334	Winchcomb	9,533	..	..	..	..	..	..	..	..
335	Cheltenham	55,506	..	..	..	..	..	..	..	..
336	Tewkesbury	12,903	..	..	..	..	..	..	..	..
	23. HEREFORD.									
337	Ledbury	12,605	7	14	21	8	5	13	34	20 0 0
338	Ross	16,369	10	5	15	13	13	26	41	28 0 0
339*a*	Hereford	34,526	20	43	63	22	11	33	96	223 0 0

Sent out to School.
The Schools are in a separate Building.
Sent out to School.
In a separate School.
In a separate Building.
Sent out to School.
Boys sent to National School.
Sent to National School.
Sent to National School.
Sent out to School.
Ditto.
Sent to National School.
Ditto.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
VI. WEST MIDLAND COUNTIES—*cont.*										£ s. d.	
	23. HEREFORD—*continued.*										
339	Dore	8,567	10	7	17	9	6	15	32	26 8 0	
340	Weobley	8,178	7	11	18	5	3	8	26	31 17 1	
341	Bromyard	11,054	..	..	..	..	..	..	..	..	Sent to National School.
342	Leominster	14,644	..	..	..	..	..	..	..	..	Ditto.
343	Kington	12,205	..	..	..	..	..	..	..	..	Ditto.
	24. SALOP.										
344	Ludlow	18,584	10	12	22	6	4	10	32	28 0 0	
345	Clun	10,166	..	..	..	..	..	..	..	..	Sent out to School.
346	Church Stretton	5,663	9	9	18	7	5	12	30	39 12 0	
347	Cleobury Mortimer	7,967	..	..	..	..	..	..	..	..	In South-east Shropshire District School.
348	Bridgnorth	15,270	..	..	..	..	..	..	..	..	Ditto.
349	Shifnal	12,821	..	..	..	..	..	..	..	..	Ditto.
350	Madeley	27,313	..	..	..	..	..	..	..	..	Ditto.
351 352	Atcham	48,640	18	25	43	29	12	41	84	104 0 0	In a separate School.
353	Oswestry	27,077	21	11	32	10	5	15	47	45 6 8	
354	Ellesmere	13,716	..	..	..	..	..	..	..	..	Sent out to School.
355	Wem	10,565	5	5	10	4	4	8	18	34 0 0	
356	Whitchurch	11,246	11	1	12	8	5	13	25	41 4 3	
357	Drayton	14,849	..	..	..	..	..	..	..	..	Sent to National School.
358	Wellington	26,484	10	13	23	14	8	22	45	47 11 2	In a separate School at Waters Upton.
359	Newport	15,346	..	..	..	..	..	..	..	..	Sent to South-east Shropshire District School.
	25. STAFFORD.										
360	Stafford	30,544	17	17	34	16	13	29	63	68 16 0	
361	Stone	29,126	12	9	21	10	2	12	33	20 8 0	
362	Newcastle-under-Lyme	34,648	17	14	31	20	9	29	60	23 13 4	
363	Wolstanton and Burslem	75,463	30	28	58	20	18	38	96	129 17 7	
364	Stoke-upon-Trent*	104,299	71	70	141	61	35	96	237	323 10 0	In a separate Building.
365	Leek	31,233	12	7	19	11	3	14	33	31 18 0	
366	Cheadle	22,724	..	..	..	..	..	..	..	11 13 4	Sent out to School.
367	Uttoxeter	14,098	8	9	17	6	1	7	24	8 12 7	This sum paid for an Industrial Trainer.
368	Burton-on-Trent	73,878	..	..	..	39	20	59	59	48 0 0	
369	Tamworth	19,397	13	3	16	17	..	17	33	24 0 0	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1883.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
	VI. WEST MIDLAND COUNTIES—*cont.*									£ s. d.	
	25. STAFFORD—*continued.*										
370	Lichfield	39,261	..	..	..	..	..	..	..	..	Sent to National Schools.
371	Cannock	36,111	..	..	..	..	..	..	..	..	Ditto.
372*a*	Seisdon	17,712	..	..	..	..	..	..	..	..	In South East Shropshire District School.
372*b*	Wolverhampton	127,728	50	70	120	39	43	82	202	234 7 0	
373	Walsall	84,126	..	..	..	..	..	..	..	..	In Walsall and West Bromwich District School.
374	West Bromwich	126,168	..	..	..	..	..	..	..	..	Ditto.
375	Dudley	140,225	23	41	64	49	17	66	130	108 0 0	
	26. WORCESTER.										
376	Stourbridge	79,593	41	11	52	47	27	74	126	106 10 0	
377	Kidderminster	41,116	9	39	48	36	24	60	108	76 15 0	
378	Tenbury	7,587	..	..	..	..	..	..	..	..	Sent to National School.
379	Martley	16,398	3	12	15	3	2	5	20	20 0 1	
380	Worcester	32,294	15	21	36	23	10	33	69	52 19 11	
381	Upton-on-Severn	23,235	..	..	..	..	..	..	..	..	Sent to National School.
382	Evesham	15,270	..	..	..	..	..	..	..	..	Sent out to School.
383	Pershore	13,559	..	..	..	..	..	..	..	..	Sent to National School.
384	Droitwich	26,091	10	11	21	7	7	14	35	23 12 0	
385	Bromsgrove	31,902	..	..	..	..	..	..	..	8 0 0	Now sent to Board School.
386	King's Norton	96,143	20	36	56	20	8	28	84	69 8 2	
	27. WARWICK.										
387	Birmingham ‖	246,352	105	101	206	91	51	142	348	375 0 1	In a separate Building.
388	Aston	209,869	50	49	99	65	38	103	202	152 13 10	
389	Meriden	11,025	..	..	..	..	..	..	..	..	Sent out to School.
390	Atherstone	14,390	..	..	..	..	..	..	..	..	Ditto.
391	Nuneaton	13,701	..	..	..	..	..	..	..	..	Ditto.
392	Foleshill	18,498	6	5	11	12	8	20	31	22 12 0	
393	Coventry †	45,116	17	23	40	29	16	45	85	98 1 0	
394	Rugby	27,197	8	8	16	8	4	12	28	27 4 0	
395	Solihull	21,365	..	..	..	..	..	..	..	..	Sent to Village School.
396	Warwick	52,861	..	..	..	29	12	41	41	62 0 0	Boys sent out to School.
397	Stratford-on-Avon	22,493	7	17	24	9	10	19	43	28 11 7	
398	Alcester	19,426	..	..	..	..	..	..	..	..	Sent to National School.
399	Shipston-on-Stour	17,881	6	7	13	15	6	21	34	32 5 0	
400	Southam	10,281	10	2	12	9	3	12	24	24 7 10	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	[Observations.
			Boys.			Girls.				
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.	Total Boys and Girls.	
	VII. NORTH MIDLAND COUNTIES.									
	28. LEICESTER.								£ s. d.	
401	Lutterworth	13,356	..	..	..	..	..	..	..	..	Sent to National School.
402	Market Harborough	16,195	14	9	23	11	5	16	39	28 2 4	
403	Billesdon	10,073	..	..	..	..	..	..	..	..	Sent out to School.
404	Blaby	21,274	..	..	..	..	..	..	..	..	Sent to School at Leicester.
405	Hinckley	17,402	9	5	14	8	2	10	24	20 16 0	
406	Market Bosworth	14,649	10	1	11	12	4	16	27	21 8 10	
407	Ashby-de-la-Zouch	33,529	7	5	12	8	5	13	25	26 0 0	
408	Loughborough	27,814	13	10	23	10	5	15	38	32 19 0	
409	Barrow-on-Soar	28,863	..	..	..	..	..	..	..	..	Sent to National School.
410	Leicester	122,351	67	50	117	34	52	86	203	229 12 9	In a separate Building.
411	Melton Mowbray	20,500	18	10	28	18	5	23	51	45 12 11	
	29. RUTLAND.									
412	Oakham	10,978	..	..	..	..	..	..	..	..	Sent out to School.
413	Uppingham	12,029	..	..	..	..	..	..	..	..	Ditto.
	30. LINCOLN.									
414	Stamford	18,346	10	9	19	8	5	13	32	34 12 0	
415	Bourn	18,918	9	6	15	12	8	20	35	25 7 0	
416	Spalding	22,962	15	13	28	10	12	22	50	59 2 0	
417	Holbeach	19,251	..	..	..	8	3	11	11	21 12 0	
418	Boston	39,406	13	24	37	11	50	61	98	70 9 0	
419	Sleaford	25,725	..	..	..	20	6	26	26	21 4 0	Boys sent to National School.
420	Grantham	33,679	..	..	..	14	7	21	21	19 12 0	
421	Lincoln	64,512	24	25	49	22	14	36	85	64 10 0	
422	Horncastle	21,839	..	..	..	20	9	29	29	14 8 7	Boys and Girls.
423	Spilsby	27,881	8	9	17	11	6	17	34	42 2 0	
424	Louth	33,835	10	8	18	8	8	16	34	21 16 0	
425	Caistor	66,904	11	9	20	20	7	27	47	51 18 0	
426	Glanford Brigg	40,181	15	10	25	9	5	14	39	30 2 9	
427	Gainsborough	29,928	11	17	28	16	6	22	50	55 1 0	
	31. NOTTINGHAM.									
428	East Retford	23,271	..	..	..	..	..	..	..	..	Sent to National School.
429	Worksop	28,522	7	10	17	7	7	14	31	18 3 0	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
	VII. NORTH MIDLAND COUNTIES—*cont*									£ s. d.	
	31. NOTTINGHAM—*continued.*										
430	Mansfield	44,951	22	8	30	20	3	23	53	24 0 0	
431	Basford	116,937	14	23	37	32	18	50	87	96 11 0	
432, 433	Nottingham	159,846	31	37	68	24	16	40	108	68 5 4	
434	Southwell	20,351	13	4	17	8	3	11	28	21 4 0	
435	Newark	30,617	..	..	..	..	..	..	..	..	Sent to National School.
436	Bingham	14,716	..	..	..	..	..	..	..	..	Sent to Board School.
	32. DERBY.										
437	Shardlow	44,672	9	9	18	5	2	7	25	34 17 0	
438	Derby	78,631	23	27	50	32	20	52	102	177 4 0	In a separate building.
439	Belper	58,184	4	..	4	14	13	27	31	59 8 0	
440	Ashbourne	20,016	6	9	15	4	4	8	23	19 3 0	
441	Chesterfield	98,740	34	27	61	33	24	57	118	65 8 0	
442	Bakewell	30,523	9	3	12	10	4	14	26	54 12 0	
443	Chapel-en-le-Frith	19,480	..	..	..	..	..	..	..	..	Sent to National School.
444*a*	Glossop	23,550	..	..	..	..	..	..	..	..	Sent out to School.
444*b*	Hayfield	12,736	..	..	..	..	..	..	..	..	Sent to National School.
	VIII. NORTH WESTERN COUNTIES.										
	33. CHESTER.										
445	Stockport	117,153	35	25	60	27	9	36	96	70 11 3	
446	Macclesfield	62,013	15	33	48	16	8	24	72	116 8 0	
447	Altrincham	58,898	..	..	..	20	10	30	30	37 0 0	Boys sent out to School.
448	Runcorn	34,022	11	23	34	20	6	26	60	61 9 0	
449	Northwich	44,045	..	..	..	..	..	..	..	3 17 0	Now sent out to School.
450	Congleton	38,010	10	9	19	10	4	14	33	47 6 7	
451	Nantwich	61,561	33	12	45	8	4	12	57	53 6 8	
452*a*	Tarvin	11,185	6	5	11	13	2	15	26	36 12 0	
452*b*	Chester†	48,410	34	30	64	36	27	63	127	113 6 8	In a separate Building.
452*c*	Hawarden	15,695	..	..	..	..	..	..	..	..	Sent out to School.
453	Wirrall	27,372	10	4	14	8	7	15	29	21 16 0	
454	Birkenhead	103,180	54	43	97	35	53	88	185	244 12 0	In a separate School.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.				
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.	Total Boys and Girls.	
	VIII. NORTH WESTERN COUNTIES—*cont.*								£ s. d.	
	34. LANCASTER.									
455	Liverpool	210,161	280	160	440	109	46	155	595	921 15 4	In the Industrial Schools at Kirkdale.
456*a*	West Derby	359,114	59	1	60	80	9	89	149	34 0 0	
456*b*	Toxteth Park *	117,028	15	32	47	26	18	44	91	149 0 0	
457	Prescot	117,939	..	..	..	..	..	..	..	..	In the Industrial Schools at Kirkdale.
458	Ormskirk	83,179	23	16	39	12	9	21	60	66 0 0	
459	Wigan	139,867	18	32	50	15	10	25	75	88 3 0	
460	Warrington	70,222	61	42	103	45	30	75	178	217 8 1	
461	Leigh	56,315	26	16	42	16	8	24	66	40 0 5	
462	Bolton	192,413	50	26	76	51	15	66	142	144 10 6	
463	Bury	129,649	34	15	49	16	8	24	73	44 0 0	
464	Barton-upon-Irwell	72,825	..	..	..	..	..	..	..	..	In the Swinton Industrial School.
465	Chorlton	260,257	36	98	134	75	59	134	268	344 19 1	
466	Salford	181,525	111	90	201	77	65	142	343	275 10 8	
467*a*	Manchester *	148,805	270	256	526	207	153	360	886	815 19 6	In the Swinton Industrial School.
467*b*	Prestwich	119,218	..	..	..	..	..	..	..	..	Ditto.
468	Ashton-under-Lyne	154,501	32	26	58	23	19	42	100	24 0 0	
469	Oldham	168,459	47	36	83	41	12	53	136	80 13 4	
470	Rochdale	121,910	34	23	57	22	15	37	94	51 0 7	
471	Haslingden	95,293	..	..	..	..	..	..	..	..	Sent to National School.
472	Burnley	118,391	..	..	..	..	..	..	..	..	Ditto.
473	Clitheroe	23,493	..	..	..	..	..	..	..	..	Ditto.
474	Blackburn	175,948	27	14	41	37	8	45	86	88 3 0	
475	Chorley	47,726	14	5	19	5	2	7	26	36 10 0	
476	Preston	129,155	43	47	90	17	43	60	150	210 10 0	
477	Fylde	40,908	..	..	..	..	..	..	..	..	Sent to National School.
478	Garstang	12,375	..	..	..	..	..	..	..	..	Sent out to School.
479	Lancaster	40,842	..	..	..	..	..	..	..	..	Sent to National School.
480	Lunesdale	7,132	..	..	..	..	..	..	..	..	Ditto.
481	Ulverstone	43,385	..	..	..	..	..	..	..	..	Sent out to School.
481*a*	Barrow-in-Furness	47,276	..	..	..	..	..	..	..	..	Sent to Board School.
	IX. YORK.									
	35. WEST RIDING.									
482	Sedbergh	4,079	..	..	..	..	..	..	..	..	Sent to National School.
483	Settle	13,802	..	..	..	..	..	..	..	..	Ditto.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1883.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
	IX. YORK—*continued.*									£ s. d.	
	35. WEST RIDING—*continued.*										
484	Skipton	37,094	10	9	19	4	5	9	28	19 12 0	
485	Pateley Bridge	8,944	..	..	..	..	..	..	..	..	Sent to Board School.
486	Ripon	16,447	..	..	..	..	..	..	..	13 6 8	Sent out to School. This sum paid for an Industrial Trainer.
487	Great Ouseburn	11,955	7	4	11	6	1	7	18	19 0 0	
488	Knaresborough	22,634	..	..	..	..	..	..	..	..	Sent to National School.
489	Wetherby	16,193	..	..	..	..	..	..	..	..	Ditto.
490	Wharfedale	46,702	..	..	..	..	..	..	..	..	Ditto.
491	Keighley	61,116	..	..	..	..	..	..	..	..	Ditto.
492	Todmorden	35,526	..	..	..	..	..	..	..	..	No School.
493	Saddleworth *	22,300	..	..	..	..	..	..	..	..	Sent to National School.
494	Huddersfield	156,504	..	..	..	..	..	..	..	30 0 0	Now sent to Board School. This sum paid for an Industrial Trainer.
495	Halifax	170,421	..	..	..	..	..	..	..	13 6 8	Sent out to School. This sum paid for an Industrial Trainer.
496*a*	North Bierley	128,557	..	..	..	..	..	..	..	..	Sent to Clayton National School.
496*b*	Bradford	183,032	21	44	65	69	16	85	150	67 3 10	
497	Hunslet	58,216	12	10	22	8	8	16	38	48 14 0	In a separate Building.
498	Holbeck	24,051	..	..	..	..	..	..	..	..	Sent to National School.
499	Bramley	54,391	6	6	12	1	2	3	15	24 5 0	
500	Leeds	190,863	58	59	117	19	19	38	155	287 5 3	In a separate Building.
501	Dewsbury	153,696	23	23	46	30	12	42	88	81 8 0	In a separate Building.
502	Wakefield	89,114	17	..	17	14	..	14	31	20 0 0	
503	Pontefract	47,862	17	9	26	16	5	21	47	35 5 0	
504	Hemsworth	11,106	..	..	..	..	..	..	..	..	Sent to National School.
505	Barnsley	78,603	22	18	40	33	19	52	92	68 8 6	
506*a*	Penistone	16,680	3	9	12	8	4	12	24	26 0 0	
506*b*	Wortley	35,587	8	7	15	10	5	15	30	30 17 0	
507	Ecclesall Bierlow	114,318	16	21	37	26	10	36	73	63 0 0	
508	Sheffield	183,138	83	56	139	36	41	77	216	213 10 5	In a separate Building.
509	Rotherham	75,494	22	7	29	14	17	31	60	40 14 0	
510	Doncaster	53,843	10	17	27	22	8	30	57	63 6 8	
511	Thorne	16,192	9	16	25	4	13	17	42	40 0 0	
512	Goole	19,580	..	..	..	..	..	..	..	..	Sent to Board School.
513	Selby	15,816	..	..	..	..	..	..	..	..	Sent to National School.
514	Tadcaster	23,955	..	..	..	..	..	..	..	..	Sent out to School.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.				
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.	Total Boys and Girls.	
	IX. YORK—*continued.*								£ s. d.	
	36. EAST RIDING.									
515	York	76,719	33	27	60	20	23	43	103	74 0 0	
516	Pocklington	15,462	11	3	14	8	8	16	30	33 2 0	
517	Howden	13,287	11	9	20	5	3	8	28	20 0 0	
518	Beverley	23,452	..	..	..	..	..	..	..	..	Sent to National School.
519	Sculcoates	99,871	21	40	61	37	30	67	128	69 0 0	
520	Kingston-on-Hull ‖	78,236	32	28	60	33	32	65	125	108 0 0	
521	Patrington	8,748	..	..	..	..	..	..	..	..	Sent to National School.
522	Skirlaugh	9,791	6	8	14	5	5	10	24	16 0 0	
523	Driffield	20,067	8	2	10	4	3	7	17	20 10 8	
524	Bridlington	16,757	..	..	..	..	..	..	..	..	Sent to National School.
	37. NORTH RIDING.									
525	Scarborough	43,265	..	..	..	..	..	..	..	..	Sent to Board School.
526	Malton	23,027	6	10	16	7	7	14	30	18 2 0	
527	Easingwold	9,533	6	6	12	3	1	4	16	19 4 0	
528	Thirsk	12,840	9	1	10	7	7	14	24	21 0 0	
529*a*	Helmsley	5,919	..	..	..	..	..	..	..	..	Sent to National School.
529*b*	Kirkby Moorside	5,514	..	..	..	..	..	..	..	..	Ditto.
530	Pickering	10,678	2	7	9	2	1	3	12	23 0 0	
531	Whitby	26,409	6	7	13	5	3	8	21	20 0 0	
532	Guisborough	43,127	9	9	18	15	11	26	44	26 9 6	
532*a*	Middlesbrough	89,871	..	..	..	..	..	..	..	..	Sent to Board School.
533	Stokesley	12,009	..	..	..	..	..	..	..	10 0 0	Ditto. This sum paid for an Industrial Teacher.
534	Northallerton	11,884	..	..	..	..	..	..	..	..	Sent to National School.
535	Bedale	8,270	..	..	..	..	..	..	..	..	Ditto.
536	Leyburn	8,323	..	..	..	..	..	..	..	..	Ditto.
537	Aysgarth	5,482	..	..	..	..	..	..	..	..	Ditto.
538	Reeth	4,717	..	..	..	..	..	..	..	..	Sent out to School.
539	Richmond	13,458	..	..	..	..	..	..	..	..	Sent to National School.
	X. NORTHERN COUNTIES.									
	38. DURHAM.									
540	Darlington	47,673	8	15	23	7	8	15	38	32 0 0	
541*a*	Stockton	51,245	29	29	58	32	16	48	106	81 0 0	In a separate Building.
541*b*	Sedgefield	17,103	..	..	..	..	..	..	..	..	Sent to National School.
542	Hartlepool	48,642	12	12	24	15	14	29	53	40 0 0	
543	Auckland	83,572	17	14	31	18	16	34	65	48 13 4	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
	X. NORTHERN COUNTIES—*cont.*									£ s. d.	
	38. DURHAM—*continued.*										
544	Teesdale	20,778	..	..	..	..	..	..	..	3 6 6	Sent to National School. This sum paid for an Industrial Trainer.
545	Weardale	17,542	..	..	..	..	..	..	..	..	Sent to National School.
546*a*	Lanchester	57,872	..	..	..	..	..	..	..	..	Ditto.
546*b*	Durham	64,564	11	14	25	16	9	25	50	66 15 10	
547	Easington	41,102	..	..	..	..	..	..	..	..	Sent to National School.
548	Houghton-le-Spring	33,927	..	..	..	..	..	..	..	..	Sent out to School.
549	Chester-le-Street	43,329	..	1	1	15	..	15	16	21 0 0	Elder Children sent out to School.
550	Sunderland	139,376	26	49	75	33	18	51	126	201 6 8	In a separate Building.
551	South Shields	103,303	18	..	18	39	24	63	81	79 6 8	In a separate Building.
552	Gateshead	105,479	31	37	68	29	17	46	114	103 8 1	
	39. NORTHUMBERLAND.										
553	Newcastle-on-Tyne	150,121	65	48	113	50	32	82	195	318 14 8	In a separate Building.
554	Tynemouth	114,306	57	24	81	42	40	82	163	152 17 1	In a separate Building.
555	Castle Ward	19,719	..	..	..	..	..	..	..	..	Sent to Parish School.
556	Hexham	34,086	15	8	23	12	4	16	39	24 17 4	In a separate Building.
557	Haltwhistle	7,903	..	..	..	..	..	..	..	..	Sent out to School.
558	Bellingham	6,107	..	..	..	..	..	..	..	..	Ditto.
559	Morpeth	36,074	..	..	..	..	..	..	..	..	Sent to National School.
560	Alnwick	21,315	..	..	..	..	..	..	..	..	Ditto.
561	Belford	5,704	..	..	..	..	..	..	..	..	Ditto.
562	Berwick-on-Tweed	21,048	..	..	..	..	..	..	..	..	Ditto.
563	Glendale	10,933	..	..	..	..	..	..	..	..	Ditto.
564	Rothbury	6,708	..	..	..	..	..	..	..	..	Sent out to School.
	40. CUMBERLAND.										
565	Alston-with-Garrigill*	4,621	..	..	..	..	..	..	..	..	Sent to Schools in the Town.
566	Penrith	23,242	9	11	20	6	2	8	28	12 0 0	
567	Brampton	10,563	..	..	..	..	..	..	..	..	Sent to Board School.
568	Longtown	7,710	..	..	..	..	..	..	..	..	Sent out to School.
569	Carlisle	52,743	..	..	..	21	11	32	32	24 0 0	Boys sent to National School.
570	Wigton	23,434	7	..	7	8	6	14	21	19 16 0	
571	Cockermouth	56,790	24	24	48	15	16	31	79	78 17 0	
572	Whitehaven	59,303	27	31	58	25	14	39	97	82 12 0	
573	Bootle	12,224	..	..	..	..	..	..	..	..	Sent to National School.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
	X. NORTHERN COUNTIES—*cont.*									£ s. d.	
	41. WESTMORELAND.										
574	East Ward	14,515	..	..	..	..	..	..	..	..	Sent to Board School.
575	West Ward	8,218	..	..	..	..	..	..	..	..	Sent to National School.
576	Kendal	41,574	16	22	38	11	7	18	56	75 6 8	Boys and girls.
	XI. MONMOUTH AND WALES.										
	42. MONMOUTH.										
577	Chepstow	18,701	..	..	..	..	..	..	..	..	Now sent out to School.
578	Monmouth	30,338	10	5	15	12	5	17	32	20 0 0	
579	Abergavenny	23,569	13	4	17	16	4	20	37	12 0 0	
580	Bedwellty	55,824	21	12	33	16	13	29	62	58 6 8	
581	Pontypool	35,335	12	10	22	10	12	22	44	24 0 0	
582	Newport	70,673	46	68	114	30	55	85	199	255 19 8	In a separate School at Caerleon.
	43. SOUTH WALES.										
	(A.) GLAMORGAN.										
583	Cardiff	106,356	45	55	100	28	42	70	170	283 18 3	In a separate School at Ely.
584	Pontypridd	93,479	..	..	..	..	..	..	..	..	Sent out to School.
585	Merthyr Tydfil	101,421	24	21	45	24	28	52	97	153 6 8	In a separate School at Aberdare.
586	Bridgend and Cowbridge	38,912	..	..	..	..	..	..	..	118 17 0	In Cottage Homes.
587	Neath	52,090	..	..	..	..	..	..	..	22 8 0	Ditto.
587*a*	Pontardawe	20,178	4	2	6	2	8	10	16	8 0 0	
588	Swansea	95,068	..	..	..	..	..	..	..	17 12 0	Now in Cottage Homes.
589	Gower	11,097	..	..	..	..	..	..	..	..	Sent to National Schools at Penmaen.
	(B.) CARMARTHEN.										
590	Llanelly	44,616	9	5	14	9	6	15	29	43 4 0	
591	Llandovery	14,240	..	..	..	..	..	..	..	..	Sent to British School.
592	Llandilo-fawr	17,324	9	2	11	2	4	6	17	19 12 0	
593	Carmarthen	35,071	..	..	..	..	..	..	..	..	Sent to School in Town.
	(C.) PEMBROKE.										
594	Narberth	19,523	4	7	11	2	5	7	18	25 10 0	
595	Pembroke	30,392	14	4	18	9	6	15	33	23 4 0	
596	Haverfordwest	33,762	11	16	27	30	13	43	70	45 13 4	

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1883.							Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmaster and School-mistress, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.			Total Boys and Girls.		
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.			
	XI. MONMOUTH AND WALES—*cont.*										
	43. SOUTH WALES—*cont.*									£ s. d.	
	(D.) CARDIGAN.										
597	Cardigan	17,581	..	..	..	..	..	..	..	..	Sent to National School.
598	Newcastle-in-Emlyn	19,015	..	..	..	..	..	..	..	..	Ditto.
599	Lampeter	10,076	..	..	..	..	..	..	..	..	Ditto.
600	Aberayron	12,537	..	..	..	..	..	..	..	..	Ditto.
601	Aberystwith	25,600	..	..	..	..	..	..	..	..	Sent to Board Schools.
602	Tregaron	10,271	..	..	..	..	..	..	..	..	Sent to neighbouring Schools.
	(E.) BRECKNOCK.										
603	Builth	8,182	7	7	14	6	4	10	24	60 5 0	
604	Brecknock	17,178	..	..	..	..	..	..	..	..	Sent out to School.
605	Crickhowell	18,554	..	..	..	..	..	..	..	..	Sent to National School.
606	Hay	10,217	..	..	..	..	..	..	..	..	Ditto.
	(F.) RADNOR.										
608	Knighton	11,782	10	15	25	4	7	11	36	27 10 0	
609	Rhayader	6,741	..	..	..	..	..	..	..	12 12 6	Now sent out to School.
	44. NORTH WALES.										
	(A.) MONTGOMERY.										
610	Machynlleth	12,576	..	..	..	..	..	..	..	..	Sent to Board School.
611	Newtown and Llanidloes	25,440	15	17	32	9	6	15	47	40 0 0	
612	Forden	18,274	10	6	16	10	3	13	29	8 0 0	
613	Llanfyllin	19,955	..	..	..	..	..	..	..	..	Sent to Board School.
	(B.) FLINT.										
614	Holywell	45,536	17	11	28	22	8	30	58	48 0 0	
	(C.) DENBIGH.										
615	Wrexham	55,172	22	18	40	26	15	41	81	69 19 0	In a separate building.
616	Ruthin	14,215	7	10	17	8	8	16	33	14 10 4	Since sent out to School.
617	St. Asaph	29,456	7	15	22	18	5	23	45	41 11 0	
618	Llanrwst	14,109	..	..	..	..	..	..	..	..	Sent to National School.

Number of Children attending the Schools of Union Workhouses, &c.—*continued.*

Reference Nos.	DIVISIONS, UNION—COUNTIES, and UNIONS.	Population, 1881.	The daily Average Number of Children attending the Schools of the Union Workhouses, &c. in England and Wales, during the Half-year ended at Lady-day 1882.						Amount of Money paid to Boards of Guardians from the Parliamentary Grant in respect of the Salaries of Schoolmasters and Schoolmistresses, for the Year ended Lady-day 1882.	Observations.
			Boys.			Girls.				
			Under 10 Years of Age.	Above 10 Years of Age.	Total.	Under 10 Years of Age.	Above 10 Years of Age.	Total.	Total Boys and Girls.	
XI. MONMOUTH AND WALES—*cont.*										
	44. NORTH WALES—*cont.*								£ s. d.	
	(D.) MERIONETH.									
619	Corwen	16,829	..	..	..	..	..	..	..	Sent out to School.
620	Bala	6,740	..	..	..	..	..	..	..	Ditto.
621	Dolgelly	15,108	..	..	..	..	..	..	..	Ditto.
622	Festiniog	29,528	..	..	..	..	..	..	..	Ditto.
	(E.) CARNARVON.									
623	Pwllheli	22,837	..	..	..	..	..	..	..	Sent to National School.
624	Carnarvon	43,996	9	14	23	9	6	15	38	23 8 0
625	Bangor	38,240	..	..	..	..	..	..	..	Sent out to School.
626	Conway	18,289	6	4	10	7	6	13	23	21 0 0
	(F.) ANGLESEY.									
627*a*	Anglesey	15,113	..	..	..	..	..	..	..	Sent out to School.
627*b*	Holyhead	19,902	17	6	23	12	5	17	40	20 12 0
	TOTAL	..	7,692	7,249	14,941	7,430	5,250	12,680	27,621	30,589 0 1
	DISTRICT SCHOOLS.									
	Central London	..	301	389	690	218	351	569	1,259	1,219 9 7
	South Metropolitan	..	488	464	952	280	313	593	1,545	1,298 8 5
	North Surrey	..	175	304	479	110	242	352	831	1,031 13 2
	Farnham and Hartley Wintney.	..	26	66	92	36	52	88	180	162 0 0
	South-east Shropshire	..	54	62	116	42	40	82	198	192 13 4
	Reading and Wokingham	..	52	49	101	40	36	76	177	298 0 9
	West London	..	264	198	462	149	162	311	773	593 14 6
	Forest Gate	..	224	105	329	146	97	243	572	761 9 4
	Walsall and West Bromwich.	..	67	86	153	93	101	194	347	394 2 1
	Brentwood	..	102	285	387	77	238	315	702	538 6 5
	Kensington and Chelsea	..	207	148	355	154	80	234	589	615 2 10
	TOTAL	..	1,960	2,156	4,116	1,345	1,712	3,057	7,178	7,105 0 5
	Metropolitan Asylum District.	..	..	541	541	..	..	..	541	1,075 3 5 In Training Ship "Exmouth."
	TOTAL in Union Workhouse Schools and District Schools	..	9,652	9,946	19,598	8,775	6,962	15,737	35,335	38,769 3 11

No. 74.

Schools certified for the Reception of Children under the Act 25 & 26 Vict. cap. 43. during the Year 1882.

(*In continuation of Eleventh Report of L. G. B., page* 319.)

Description of School.	Where situated.	County.	Date of Certificate.
"Training Home for Girls" for the shelter, protection, and training of young girls for domestic service.	Vale House, No. 135, Saint Domingo Vale, Liverpool.	Lancaster - -	28 February 1882.
Wigton Orphanage for the education of Roman Catholic girls.	Wigton - - -	Cumberland -	8 March 1882.
House of Faith for the reception of destitute orphan girls.	Launceston - -	Cornwall - -	8 June 1882.
Girls' Friendly Society Home.	No. 76, Newland, Lincoln.	Lincoln - -	8 July 1882.
"The House of Mercy," for the reception of infant children under six years of age.	Lostwithiel - -	Cornwall - -	10 August 1882.
For the training of destitute girls for domestic service.	No. 29, Fitzwilliam road, Grafton Square, Clapham.	Surrey - -	10 August 1882.
The Dinas Training Home for Orphan Girls.	Dinas, Brecknock, South Wales.	Brecknock - -	14 September 1882.
"Charlton Cottage Home"	Charlton - - - -	Wilts - - -	9 December 1882.

Certificates cancelled during the Year 1882.

Description of School.	Where situated.	County.	Date of Certificate.	When cancelled.
Saint Philip's Orphanage for the education of poor orphan boys.	Oliver Road, Edgbaston, Birmingham.	Warwick -	19 Aug. 1880 -	17 Jan. 1882.
For Roman Catholic pauper boys.	Cranford Hall, Cranford.	Middlesex -	13 Dec. 1878 -	25 Jan. 1882.
For the education and industrial training of destitute girls.	Acre Square, Park Road, Clapham.	Surrey - -	26 June 1875 -	10 Aug. 1882.
Convalescent Home for Roman Catholic boys.	No. 1, Victoria Terrace, Southend.	Essex - -	18 Jan. 1879 -	20 Oct. 1882.

No. 75.—Return of Expenditure during the Year ended Lady-day 1882 at the Metropolitan Pauper Schools.

Union, Parish, or District to which the School belongs. (*Arranged according to the number of Days Maintenance.*)	Number of Days Maintenance (including Paupers chargeable to other Authorities).	PROVISIONS for Inmates (purchased and from Farm. 52 weeks).								
		Flour and Bread.	Meat, including Bacon, Preserved Meat, and Extract of Meat.	Vegetables.	Grocery and Cheesemongery, including Butter, Eggs, Lard, Corn, chandlery, &c.	Milk.	Beer.	Wine and Spirits.	Other Provisions.	Total.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
		£	£	£	£	£	£	£	£	£
1. South Metropolitan District (Sutton)	562,078	2,971	3,499	389	2,276	1,628	4	80	133	10,980
2. Central London District	459,775	2,699	4,283	649	1,482	1,643	–	14	40	10,810
3. North Surrey District	315,713	1,586	1,914	295	1,362	1,419	–	18	–	6,594
4. West London District	261,136	1,730	2,059	306	704	1,564	–	16	7	6,386
5. Brentwood District	252,338	1,374	1,175	122	561	890	1	27	62	4,212
6. Lambeth	231,198	1,023	2,092	224	925	1,027	–	26	45	5,362
7. St. Pancras	221,762	1,015	1,916	301	636	578	–	10	–	4,456
8. Forest Gate District	211,116	1,349	888	116	587	998	6	11	398	4,353
9. Metropolitan Asylum District Training Ship "Exmouth"	203,047	1,715	3,610	341	1,938	34	–	–	131	7,769
10. Kensington and Chelsea District (Banstead)	200,116	976	1,357	149	641	960	–	2	71	4,156
11. Holborn	185,160	1,153	1,200	164	637	451	–	11	76	3,692
12. St. Marylebone	159,693	810	1,018	131	598	915	–	4	36	3,512
13. Bethnal Green	147,563	765	978	128	576	592	3	3	164	3,209
14. Strand	146,919	874	1,006	143	136	849	19	51	6	3,084
15. Mile End Old Town (Hamlet)	137,523	468	819	102	329	454	–	27	7	2,206
16. Islington	134,181	736	952	91	161	582	–	1	4	2,527
17. St. George-in-the-East	95,224	535	622	117	136	619	2	4	4	2,039
18. Westminster	68,176	557	624	76	242	402	–	4	10	1,915
19. South Metropolitan District (Branch School, Herne Bay)	48,012	311	306	57	178	138	28	43	–	1,061
Total	4,039,830	22,647	30,318	3,901	14,105	15,743	63	352	1,194	88,323

Note.—Fractions of a £ under 10*s.* have been disregarded in the above entries; 10*s.* or above have been entered as a £.

RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Pauper Schools—*continued.*

UNION, PARISH, or DISTRICT to which the School belongs. (*Arranged according to the number of Days Maintenance.*)	NECESSARIES for Inmates, Officers, and the Building. 52 weeks.						CLOTHING.
	Warming.	Cleansing.	Lighting.	Water.	Other Necessaries.	TOTAL.	(The cost of the New Stock acquired.)
	12.	13.	14.	15.	16.	17.	18.
	£	£	£	£	£	£	£
1. South Metropolitan District (Sutton)	1,322	706	679	300	109	3,116	4,216
2. Central London District	1,442	630	614	–	–	2,686	3,828
3. North Surrey District	1,259	441	373	423	–	2,496	2,495
4. West London District	1,694	331	535	–	300	2,860	2,154
5. Brentwood District	655	333	193	117	57	1,355	1,493
6. Lambeth	415	242	215	193	18	1,083	1,424
7. St. Pancras	722	424	218	–	–	1,364	1,175
8. Forest Gate District	548	212	251	133	109	1,253	1,074
9. Metropolitan Asylum District Training Ship "Exmouth"	268	545	380	109	336	1,638	3,993
10. Kensington and Chelsea District (Banstead)	619	117	334	251	241	1,562	1,398
11. Holborn	547	192	227	22	7	995	799
12. St. Marylebone	437	134	208	–	47	826	1,106
13. Bethnal Green	266	120	153	101	70	710	940
14. Strand	297	92	172	–	35	596	595
15. Mile End Old Town (Hamlet)	215	141	158	97	15	626	720
16. Islington	313	139	159	163	79	853	579
17. St. George-in-the-East	258	159	189	18	26	650	713
18. Westminster	153	69	42	58	35	357	792
19. South Metropolitan District Branch School, Herne Bay	153	118	45	50	1	367	394
TOTAL	11,583	5,145	5,145	2,035	1,485	25,393	29,888

RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Pauper Schools—*continued.*

UNION, PARISH, or DISTRICT to which the School belongs. (*Arranged according to the number of Days Maintenance.*)	OTHER CHARGES.							
	Drugs, Medical and Surgical Appliances.	Funerals.	Officers and Servants (excluding Farm Account).			Furniture and Bedding and Property, and Repairs to ditto.	Rent, Rates, Taxes, Tithes, Insurance.	Buildings and Fixtures, and Repairs to ditto.
			Salaries, Wages, Gratuities, and Fees to Officers.	Rations.	Uniform.			
	19.	20.	21.	22.	23.	24.	25.	26.
	£	£	£	£	£	£	£	£
1. South Metropolitan District (Sutton)	45	12	5,868	3,436	16	1,986	622	1,408
2. Central London District	240	4	5,600	3,386	96	2,408	317	1,748
3. North Surrey District	87	14	3,798	1,900	89	1,821	578	1,276
4. West London District	35	–	2,269	1,705	41	1,155	322	3,236
5. Brentwood District	15	7	2,072	1,358	10	1,249	256	1,183
6. Lambeth	15	–	1,553	1,226	63	655	221	514
7. St. Pancras	57	5	2,079	1,573	93	755	220	827
8. Forest Gate District	25	4	2,564	1,475	–	525	119	1,357
9. Metropolitan Asylum District, Training Ship "Exmouth"	91	5	2,839	1,483	252	882	201	1,636
10. Kensington and Chelsea District (Banstead)	82	–	2,157	2,346	157	688	301	260
11. Holborn	29	5	1,602	1,249	14	762	251	256
12. St. Marylebone	42	7	1,510	959	19	553	204	688
13. Bethnal Green	72	–	1,551	960	–	798	203	94
14. Strand	32	2	1,364	1,009	20	236	242	330
15. Mile End Old Town (Hamlet)	12	4	869	558	3	523	138	664
16. Islington	25	4	1,111	646	97	485	222	485
17. St. George-in-the-East	19	–	1,226	975	5	388	157	196
18. Westminster	10	3	573	501	7	168	99	215
19. South Metropolitan District, (Branch School, Herne Bay)	34	5	1,064	441	–	594	92	117
TOTAL	967	81	41,669	27,186	982	16,631	4,765	16,490

RETURN of EXPENDITURE during the Year ended Lady-day 1882 at the Metropolitan Pauper Schools—*continued.*

UNION, PARISH, or DISTRICT to which the School belongs. (*Arranged according to the number of Days Maintenance.*)	OTHER CHARGES—*cont.*				TOTAL EXPENDITURE, excluding Repayment of Loans and Interest and deducting Profit Recoupments.	LOANS.	PROFIT RECOUPMENTS.	
	Loss on Farm or on Labour.	Other Expenditure debited to this Establishment, except Loan Account.	TOTAL.	TOTAL of "Other Charges," after deducting the Profit Recoupments.		Repayment of Principal and Interest on Loans for this Building.	Net Farm Profit or Labour Profit.	From Sale of Stores, Waste, &c.
	27.	28.	29.	30.	31.	32.	33.	34.
	£	£	£	£	£	£	£	£
1. South Metropolitan District, (Sutton)	–	417	13,810	13,426	31,738	3,773	253	131
2. Central London District	–	319	14,118	13,947	31,271	2,236	98	73
3. North Surrey District	102	622	10,287	10,248	21,833[a]	3,015	–	39
4. West London District	–	355	9,118	8,459	19,859	5,665	546	113
5. Brentwood District	–	91	6,241	5,928	12,988	3,313	302	11
6. Lambeth	–	50	4,297	4,118	11,987	806	179	–
7. St. Pancras	–	548	6,157	5,942	12,937	2,979	204	11
8. Forest Gate District	–	103	6,172	6,031	12,711	2,314	128	13
9. Metropolitan Asylum District, Training Ship "Exmouth"	–	555	7,944	7,886	21,286	1,731	–	58
10. Kensington and Chelsea District (Banstead)	450	344	6,785	6,782	13,898	4,629	–	3
11. Holborn	–	30	4,198	4,183	9,669	2,118	7	8
12. St. Marylebone	–	252	4,234	4,190	9,634	266	–	44
13. Bethnal Green	–	101	3,779	3,567	8,426	507	188	24
14. Strand	–	92	3,327	2,947	7,222	1,072	380	–
15. Mile End Old Town (Hamlet)	–	81	2,852	2,831	6,383	373	–	21
16. Islington	–	137	3,212	3,154	7,113	802	–	58
17. St. George-in-the-East	–	64	3,030	2,970	6,372	–	53	7
18. Westminster	–	56	1,632	1,581	4,645	–	49	2
20. South Metropolitan District (Branch School, Herne Bay)	–	53	2,400	2,352	4,174	516	19	29
TOTAL	552	4,270	113,593	110,542	254,146	36,115	2,406	645

[a] Excluding 1,439*l.* paid to outgoing Unions, after separation from the District.

ANALYSIS of the RETURN of EXPENDITURE during the Year ended LADY-DAY 1882 at the METROPOLITAN PAUPER SCHOOLS.

UNION, PARISH, or DISTRICT to which the School belongs. (*Arranged according to the Total Cost per Head.*)	Average Number of Inmates maintained daily during the Year.*	PROVISIONS.		NECESSARIES.		CLOTHING.		OTHER CHARGES.		TOTAL EXPENDITURE during the Year.	TOTAL. COST per Head per annum.
		Total.	Cost per Head.	Total.	Cost per Head.	Total.	Cost per Head.	Total.	Cost per Head.		
								Excluding Loans and deducting Profit Recoupments.			
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
		£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
1. Metropolitan Asylum District, Training Ship "Exmouth"	557·8	7,769	13 18 7	1,638	2 18 9	3,993	7 3 2	7,886	14 2 9	21,286	38 3 3
2. South Metropolitan Dist^{t}, Herne Bay	131·9	1,061	8 0 11	367	2 15 8	394	2 19 9	2,352	17 16 8	4,174	31 12 11
3. West London District	717·4	6,386	8 18 0	2,860	3 19 9	2,154	3 0 1	8,459	11 15 10	19,859	27 13 8
4. Kensington and Chelsea District	549·7	4,156	7 11 3	1,562	2 16 10	1,398	2 10 10	6,782	12 6 9	13,898	25 5 8
5. North Surrey District	867·3	6,594	7 12 1	2,496	2 17 7	2,495	2 17 6	10,248	11 16 4	21,833	25 3 6
6. Westminster	187·2	1,915	10 4 7	357	1 18 2	792	4 4 7	1,581	8 19 7	4,645	24 16 3
7. Central London District	1,263·1	10,810	8 11 2	2,686	2 2 6	3,828	3 0 7	13,947	11 0 10	31,271	24 15 2
8. St. George-in-the-East	261·6	2,039	7 15 11	650	2 9 8	713	2 14 6	2,970	11 7 1	6,372	24 7 2
9. St. Marylebone	438·7	3,512	8 0 1	826	1 17 8	1,106	2 10 5	4,190	9 11 0	9,634	21 19 2
10. Forest Gate District	579·9	4,353	7 10 1	1,253	2 3 3	1,074	1 17 0	6,031	10 8 0	12,711	21 18 5
11. St. Pancras	609·2	4,456	7 6 3	1,364	2 4 9	1,175	1 18 7	5,942	9 15 1	12,937	21 4 8
12. Bethnal Green	405·3	3,209	7 18 4	710	1 15 0	940	2 6 5	3,567	8 16 0	8,426	20 15 9
13. South Metropolitan District, Sutton	1,544·1	10,980	7 2 3	3,116	2 0 4	4,216	2 14 7	13,426	8 13 11	31,738	20 11 1
14. Islington	368·6	2,527	6 17 1	853	2 6 3	579	1 11 5	3,154	8 11 2	7,113	19 5 11
15. Holborn	508·6	3,692	7 5 2	995	1 19 2	799	1 11 5	4,183	8 4 6	9,669	19 0 3
16. Lambeth	635·1	5,362	8 8 10	1,083	1 14 1	1,424	2 4 10	4,118	6 9 8	11,987	18 17 6
17. Brentwood District	693·2	4,212	6 1 6	1,355	1 19 1	1,493	2 3 1	5,928	8 11 0	12,988	18 14 9
18. Strand	401·1	3,084	7 13 9	596	1 9 9	595	1 9 8	2,947	7 6 11	7,222	17 19 7
19. Mile End Old Town	377·8	2,206	5 16 9	626	1 13 2	720	1 18 1	2,831	7 9 10	6,383	16 2 0
TOTAL	11,097·6	88,323	—	25,393	—	29,888	—	110,542	—	254,146	—
or AVERAGE	—	—	7 19 2	—	2 5 9	—	2 13 10	—	9 19 2	—	22 18 0

* Dividing the number in Column 2 of page 268 by 364.

No. 76.—RETURN of the AVERAGE PRICES PAID, during the Year ended LADY-DAY 1882, for various Articles used in the METROPOLITAN SCHOOLS.

UNION, PARISH, or DISTRICT to which the SCHOOL belongs.	Situation of School.	Flour. Per sack.	Bread. Per cwt.	Beef. Per stone of 14 lbs.	Mutton. Per stone of 14 lbs.	Legs of Beef. Per stone of 14 lbs.	Bacon. Per cwt.	Milk. Per gallon of 8 pints.	Eggs. Per 120.	Butter, Butterine, &c. Per cwt.	Lard. Per cwt.
		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Bethnal Green - -	Leytonstone -	36 0	12 8	8 1	10 7	8 1	79 4	11½	10 11	111 0	56 0
St. George-in-the-East	Plashet - -	35 6	12 1	8 0	*8 0*	–	93 4	1 3	11 0	152 8 108 8	57 2
Holborn - - -	Mitcham - -	40 0	12 5	8 10	9 3	*8 6*	84 6	1 0	10 3	124 6	–
Islington - - -	Hornsey Rise -	35 11	12 0½	**9 5** 6 7½	9 5	4 10	–	10	9 0	104 6	–
Lambeth - - -	Norwood - -	36 1	10 6	8 3½	9 2½	5 3	–	9½	9 9	83 6	**93 4**
St. Marylebone - -	Southall - -	35 3	11 8	8 10½	8 10½	4 8	–	1 0	9 9	103 6	53 8
Mile End Old Town (Hamlet).	Mile End - -	35 10	*9 4*	7 1	8 4	3 7	**100 4**	10	9 5	111 0	58 4
St. Pancras - - -	Leavesden -	34 6	11 8	9 0	9 4	3 8	69 0	11	9 6	108 0	54 0
Strand - - - -	Edmonton -	37 0	–	8 0	10 2	4 1	70 0	1 0	9 7½	111 0	–
Westminster - -	Battersea - -	40 0	14 7	9 0½	9 0½	4 1	–	10	**15 0**	153 8 90 6	–
Central London District.	Hanwell - -	37 9	–	8 1½ *6 5*	8 11	–	76 6	1 3	9 0	166 10 101 0	*49 0*
South Metropolitan District.	Sutton - -	35 6	–	8 4	10 4	4 0½	98 0	11½	9 7	103 6	63 0
Do. Do.	Herne Bay -	**41 3**	14 7	8 4	10 8½	4 2½	92 6	11	9 9½	112 0	70 0
North Surrey District	Anerley - -	*33 6*	11 8	9 0½	9 11	6 5	–	1 0½	9 0	128 0	56 0
West London District	Ashford, Middx.	38 6	Own make.	8 2	9 1½	5 7 5 1½	*63 0*	From Farm.	9 7½	158 8 *80 0*	51 4
Forest Gate District -	Forest Gate -	39 0	13 10½	8 2	8 2	–	98 0	11	10 9	**168 0** 108 9	60 8
Kensington and Chelsea District.	Banstead - -	35 6	11 2½	9 3	10 0	–	80 8	1 1	9 7½	99 0	–
Brentwood District -	Brentwood -	35 3	11 8	8 3½	**11 3½** 9 9½	–	84 0	1 0	10 0	99 0 85 6	77 0
Metropolitan Asylum District: Training Ship "Exmouth."	Off Grays - -	40 10	**15 1**	9 1	9 9	–	78 0	**1 4½**	*7 8*	121 8	57 3
Highest Price (printed above in **bold** type)		41 3	15 1	9 5	11 3½	8 1	100 4	1 4	15 0	168 0	93 4
Lowest Price (printed above in *italics*) -		33 6	9 4	6 5	8 0	3 5	63 0	9½	7 8	80 0	49 0

RETURN of the Average Prices paid, during the Year ended Lady-day 1882, for various Articles used in the Metropolitan Schools—*continued.*

UNION, PARISH, or DISTRICT to which the SCHOOL belongs.	Cheese.	Tea.	Coffee.	Cocoa.	Sugar.		Molasses.	Currants.	Raisins.	Pepper.	Mustard.	Salt.
					Moist.	Loaf.						
	Per cwt.	Per lb. (including duty).	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per lb.	Per lb.	Per ton.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Bethnal Green	71 0	1 10	126 0	63 0	22 10	32 10	14 3	33 10	38 6	4	6	29 2
St. George-in-the-East	78 4 59 4	**2 4** 1 3¾	140 0	–	25 8	31 11	**18 8**	–	42 0	6½	9	32 9
Holborn	70 0	*1 2½*	*107 4*	51 4	22 7½	32 8	–	28 0	34 0	5½	6	39 2
Islington	60 8	1 5½	–	–	21 11½	32 4	11 8½	33 2	40 8	5	7	33 4
Lambeth	57 0	–	–	84 0	22 0	–	14 0	30 4	37 4	5½	5½	35 0
St. Marylebone	59 0	–	–	107 8	23 10½	–	11 9	30 4	34 8	9½	7½	50 0
Mile End Old Town (Hamlet).	57 3	1 5	126 0	–	22 4½	32 0	–	35 0	37 4	8	5½	30 0
St. Pancras	78 0	1 6	140 0	108 0	27 6	30 6	–	*26 0*	*32 0*	7	11	**55 0**
Strand	84 0	1 6	140 0	62 0	22 6	**33 0**	14 6	31 0	36 0	4	10	35 0
Westminster	**92 6** 63 0	2 0 1 3	121 4	60 8	*20 6*	*30 4*	16 4	32 8	37 4	8 6	**1 6**	40 0
Central London District	59 0 *52 0*	1 8½	121 4	56 0	23 6	31 0	13 7½	28 0	39 0	7½ 4½	1 2½ 5½	49 2
South Metropolitan District.	59 0	1 9	130 0	50 6	22 10½	31 6	13 9	42 0	**47 6**	5	1 3	30 0
Do. Do.	67 8	1 9	147 0	58 4	23 3	31 6	15 3	40 0	44 0	6	1 1	37 6
North Surrey District	57 0	1 9	135 4	**125 6**	26 0	31 6	*11 6*	30 4	42 0	5	7½	41 8
West London District	61 0	1 8 1 4	112 0	56 0	26 0	32 8	12 0	32 0	33 0	5½	7½	*25 0*
Forest Gate District	88 8	**2 4**	140 0	*46 8*	25 0	32 0	**18 8**	**46 8**	46 8	6½	6	30 0
Kensington and Chelsea District.	69 0	1 8	116 8	48 0	21 6	31 6	11 9	30 0	34 0	5	6	40 0
Brentwood District	77 6 62 0	1 9	**149 4**	54 0	24 0	30 6	13 0	30 0	37 0	8	5	35 0
Metropolitan Asylum District: Training Ship "Exmouth."	71 0	1 11	130 8	53 3	**29 9**	32 8	–	32 7	38 8	6	1 1	45 6
Highest Price (printed above in **bold** type).	92 6	2 4	149 4	125 6	29 9	33 0	18 8	46 8	47 6	9½	1 6	55 0
Lowest Price (printed above in *italics*).	52 0	1 2½	107 4	46 8	20 6	30 4	11 6	26 0	32 0	4	5	25 0

RETURN of the Average Prices paid, during the Year ended Lady-day 1882, for various Articles used in the Metropolitan Schools—*continued.*

UNION, PARISH, or DISTRICT to which the SCHOOL belongs.	Vinegar.	Rice.	Arrowroot.	Sago.	Oatmeal.	Pearl Barley.	Split Peas.	Potatoes.	Wine.	Gin.	Brandy.	Ale.
	Per gallon.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per cwt.	Per bushel.	Per ton.	Per gallon.	Per gallon.	Per gallon.	Per barrel of 36 gallons.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Bethnal Green	11	12 6	37 4	24 7	14 9	15 6	6 9	95 0	10 0	–	19 0	31 9
St. George-in-the-East	1 0	12 11	–	–	–	–	–	95 0	8 6	10 9	*13 7*	29 10
Holborn	11	11 0	*80 4*	–	14 0	16 0	6 6½	105 0	10 0	11 3	18 0	*28 6*
Islington	8	*10 10½*	40 8	–	*13 7½*	–	6 6	90 0	7 9	11 6	21 11½	36 0
Lambeth	**2 4**	14 0	37 4	16 4	16 6	–	7 0	95 0	*8 6*	*10 6*	16 1½	30 6
St. Marylebone	1 6	12 7½	–	–	–	–	7 1½	100 0	6 7	–	17 6	34 0
Mile End Old Town (Hamlet).	9	12 4	70 0	23 4	16 4½	**22 2**	6 9½	96 3	8 6	10 7	15 6	30 6
St. Pancras	1 8½	12 3	32 0	*10 6*	16 0	15 0	6 4½	*87 6*	**18 0**	–	–	–
Strand	1 0	13 0	36 0	–	15 7½	17 3	7 6	105 0	9 0	11 1½	20 6	–
Westminster	1 3	15 6	49 0	28 0	18 9	20 0	9 6	**120 6**	12 0	**13 6**	20 0	40 0
Central London District	1 4½	**15 10½** 12 9	*80 4*	18 8	–	17 6	7 0	120 0	14 0	–	**24 0**	40 8 33 3
South Metropolitan District.	7½	13 0	32 0	13 3	14 0	*11 9*	6 10½	120 0	12 0	–	20 0	40 6 36 0
Do. Do.	1 4	12 1½	32 0	–	14 0	*11 9*	6 10½	110 0	12 0	–	21 0	42 0
North Surrey District	1 1½	12 4½	–	14 0	–	–	*6 0*	100 0	14 8	–	–	36 0
West London District	1 0	12 3	42 0	18 0	14 9	14 6	*6 0*	100 0	16 0	–	21 0	36 0
Forest Gate District	10½	12 6	**74 8**	**37 4**	–	–	6 7½	101 0	13 4	12 0	20 10	**45 0**
Kensington and Chelsea District.	1 4	12 9	60 8	17 0	**23 4**	–	6 9	120 0	15 0	–	17 6	38 0
Brentwood District	1 1½	14 6	**74 8**	18 8	16 9	1 3	6 6	90 0	10 4	–	22 0	31 0
Metropolitan Asylum District: Training Ship "Exmouth."	1 6	15 8	–	–	16 0	–	**12 0**	109 7	–	–	–	–
Highest Price (printed above in **bold** type).	2 4	15 10½	74 8	37 4	23 4	22 2	12 0	120 6	18 0	13 6	24 0	45 0
Lowest Price (printed above in *italics*).	7½	10 10½	30 4	10 6	13 7½	1 9	6 0	87 6	5 6	10 6	13 7	28 6

RETURN of the Average Prices paid, during the Year ended Lady-day 1882, for various Articles used in the Metropolitan Schools—*continued*.

UNION, PARISH, or DISTRICT to which the SCHOOL belongs.	Porter.	Coals.		Coke.	Gas.	Soap.	Soda.	Starch.	Candles.	Cost of each Funeral, including cost of Coffin and all Fees.
		House.	Gas or Steam.							
	Per barrel of 36 gallons.	Per ton.	Per ton.	Per chaldron.	Per 1,000 ft.	Per cwt.	Per cwt.	Per cwt.	Per 1/2 lbs.	
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Bethnal Green	–	17 6	–	11 3	3 9	27 6	4 6	23 9	4 0	7 9
St. George-in-the-East	*26 8*	16 11½	14 3	10 7½	3 8½	27 6	4 8	23 10	4 4	About 17 8
Holborn	27 6	**19 10½**	17 9	9 9	4 5	27 6	4 1½	39 8	3 5½	27 6 20 11
Islington	29 8½	14 8½	16 11 13 10½	12 2	3 2	*18 9*	3 6	24 0	4 3	18 3
Lambeth	28 0	19 3	–	–	2 10	25 2	3 7½	28 0	4 10½	23 6 20 0
St. Marylebone	–	15 2	19 1½ 17 5	–	3 9	23 9	5 3	42 0	–	15 0
Mile End Old Town (Hamlet).	28 0	15 7½	*13 0½*	11 0	3 0	26 6	4 6	*23 4*	8* 5*	19 6
St. Pancras	–	*14 7*	15 11	–	4 2	24 0	4 11	35 0	3 6	*34 0*
Strand	28 0	17 3	16 6	9 0	3 9½	**29 0**	5 0	**51 4**	6 0	17 2
Westminster	**40 0**	18 9	–	–	2 10	25 9	4 2	32 8	5 5	17 2
Central London District	–	18 0	17 9 17 6	**18 0**	*2 1½*	24 0	5 1½	32 8	5 0 3 0	49 9
South Metropolitan District.	33 0	18 9	**20 9**	–	3 6	25 0	3 10	42 0	4 6	35 0
Do. Do.	36 0	19 4	–	–	**5 0**	26 0	4 9	31 6	5 9	34 0
North Surrey District	33 0	19 3	17 3	11 6	3 6	24 6	**6 0½**	30 4	4 0	**56 0**
West London District	–	19 9	18 3 16 6	–	Own make.	23 3 21 6	3 7½	32 8	3 0	Removed by the Unions.
Forest Gate District	33 0	18 0	14 6	9 0	3 7½	25 0	*3 0*	37 4	5 4	–
Kensington and Chelsea District.	–	19 4	18 9	10 11	4 3½	21 3	4 11	32 8	4 9	–
Brentwood District	33 0	16 9	13 9	13 3	4 2	25 3	3 9	24 0	3 1½	19 11
Metropolitan Asylum District: Training Ship "Exmouth."	–	18 8	16 6	*8 9*	–	25 4 19 6	4 0	–	6 6	51 0
Highest Price (printed above in **bold** type).	40 0	19 10½	20 9	18 0	5 0	29 0	6 0½	51 4	6 6	56 0
Lowest Price (printed above in *italics*).	26 8	14 7	13 0½	8 9	2 1½	18 9	3 0	23 4	5	7 9

* Reference to the Contract shows that these sums are correctly entered.

No. 77.

METROPOLIS.—RETURN showing the nature of the EMPLOYMENTS in which CHILDREN from the PAUPER SCHOOLS were placed during the Year 1882.

NAME OF UNION, PARISH, OR DISTRICT TO WHICH THE SCHOOL (OR SCHOOLS) BELONGS.	BOYS.											
	Army Band.	Baker.	Blacksmith.	Bookbinder.	Brushmaker.	Builder.	Butcher.	Cabinet Maker.	Carpenter and Joiner.	Clerk.	Coachbuilder.	Cooper.
Central London District	20	4	1	..	1	1	..	..	..	..	..	..
South Metropolitan District	9	7	..	..	..	..	2	..	..	1	..	..
North Surrey District	5	23	..	..	..	..	..	..	6	..	..	..
West London District	6	2	..	..	..	..	..	1	1	..	..	..
Forest Gate District	14	1	..	..	..	..	..	..	..	..	..	..
Kensington and Chelsea District.	2	3	2	1	..	..	..	..	..	..	2	..
Brentwood District	2	4	..	..	..	..	1	1	1	1[a]	..	..
Metropolitan Asylum District, Training Ship "Exmouth."	46	..	..	..	..	..	..	..	..	..	..	..
Bethnal Green	..	..	..	..	..	..	..	2	..	..	..	..
St. George-in-the-East	..	..	..	..	..	..	..	..	1	..	..	..
Holborn	10	2	..	..	1	..	..	..	..	..	..	..
Islington	8	2[b]	..	..	..	..	..	..	..	..	..	..
Lambeth	14	2	..	..	..	..	..	..	..	..	..	..
St. Marylebone	..	..	..	..	..	..	..	..	..	..	..	..
Mile End Old Town	..	..	..	..	..	..	..	1	..	1	..	2
St. Pancras	7	4	..	..	..	..	..	..	..	..	..	..
Strand	8	4	..	..	..	..	..	..	..	..	..	..
Westminster	..	2	..	..	..	..	..	..	..	..	..	..
TOTAL	151	60	3	1	2	1	3	5	9	3	2	2

[a] This boy was removed by his brother and placed in a situation by him.
[b] Sent to the workhouse to be employed under the officer in question.

METROPOLIS.—RETURN showing the nature of the EMPLOYMENTS in which CHILDREN from the PAUPER SCHOOLS were placed during the Year 1882—*continued.*

NAME OF UNION, PARISH, OR DISTRICT TO WHICH THE SCHOOL (OR SCHOOLS) BELONGS.	Boys.											
	Cornchandler.	Domestic Service, Page, &c.	Draper.	Eating House.	Engineer.	Farrier.	Gardener and Farm.	Glasscutter.	Gold Lace Maker.	Grocer.	Hairdresser.	"Homes," Training and Working.
Central London District -	..	..	..	..	..	1	1	1	2	1	..	..
South Metropolitan District	..	6	..	..	..	..	..	..	..	1	4	..
North Surrey District -	..	3	1	1	2	1	2	..	..	1	..	..
West London District -	..	4	..	1	..	..	..	..	..	..	..	..
Forest Gate District - -	..	7	..	..	..	..	..	..	..	..	..	20[a]
Kensington and Chelsea District.	..	2	..	..	..	..	1	..	..	1	4	..
Brentwood District - -	..	1	..	..	..	..	..	..	..	2	..	..
Metropolitan Asylum District, Training Ship "Exmouth."	..	..	..	..	..	..	..	..	..	..	..	..
Bethnal Green - -	..	2	..	..	..	..	..	..	..	..	..	12
St. George-in-the-East -	..	..	..	..	..	..	1	..	..	..	..	4[b]
Holborn - - - -	..	1	..	..	..	..	1	..	..	..	..	1
Islington - - - -	1	..	..	..	2[c]	..	..	..	..	..	..	..
Lambeth - - - -	..	1	1	..	..	..	..	..	..	..	1	..
St. Marylebone - -	..	2	..	..	1	..	..	..	..	..	..	..
Mile End Old Town - -	..	..	..	..	..	..	..	..	..	..	2	..
St. Pancras - - - -	..	..	..	..	..	..	..	..	..	..	1	25
Strand - - - - -	..		..	..	..	..	..	..	..	..	..	..
Westminster - - - -	..	2	..	..	..	..	..	..	..	..	..	..
TOTAL - - -	1	34	2	2	5	2	6	1	2	6	12	62

[a] Boys Homes, Whitechapel.
[b] All doing well.
[c] Sent to the workhouse to be employed under the officer in question.

METROPOLIS.—RETURN showing the nature of the EMPLOYMENTS in which CHILDREN from the PAUPER SCHOOLS were placed during the Year 1882—*continued.*

NAME OF UNION, PARISH, OR DISTRICT TO WHICH THE SCHOOL (OR SCHOOLS) BELONGS.	BOYS.										
	Hosier.	Ironmonger.	Laundry.	Mathematical Instrument Maker.	Milkman.	Messenger (Post Office).	Oilman.	Pawnbroker.	Pipe Mounter.	Plumber or Painter.	Scale Maker.
Central London District -	..	..	..	..	..	..	1	..	1	1	..
South Metropolitan District	..	1	..	..	5	..	..	..	..	..	..
North Surrey District -	..	..	..	..	2	1	..	..	..	2	..
West London District -	..	..	..	..	..	..	..	..	..	..	..
Forest Gate District - -	..	..	..	..	..	..	..	..	..	..	..
Kensington and Chelsea District.	1	..	..	..	..	..	1	..	..	..	..
Brentwood District - -	..	..	..	..	..	..	..	..	..	..	..
Metropolitan Asylum District, Training Ship "Exmouth."	..	..	..	..	..	..	..	..	..	..	..
Bethnal Green - -	..	..	..	..	..	..	..	..	..	1	..
St. George-in-the-East -	..	..	..	..	..	..	..	..	..	..	..
Holborn - - - -	..	..	1	..	..	..	..	1	..	..	1
Islington - - -	..	..	..	..	1	..	..	..	..	1	..
Lambeth - - -	..	..	..	..	..	..	1	..	..	..	..
St. Marylebone - -	..	..	..	..	..	..	..	..	..	..	..
Mile End Old Town - -	..	..	..	1	..	..	..	..	..	..	..
St. Pancras - - -	..	..	..	..	..	..	..	..	..	..	..
Strand - - - -	..	..	..	..	1	..	..	..	..	..	..
Westminster - - -	..	..	..	..	..	..	..	..	..	..	..
TOTAL - - -	1	1	1	1	9	1	3	1	1	5	1

METROPOLIS.—RETURN showing the nature of the EMPLOYMENTS in which CHILDREN from the PAUPER SCHOOLS were placed during the Year 1882—*continued.*

NAME OF UNION, PARISH, OR DISTRICT TO WHICH THE SCHOOL (OR SCHOOLS) BELONGS.	BOYS.									GIRLS.		No. of Children who were returned to Workhouse for whom no employment could be found.
	SEA.											
	Navy.	Mercantile Marine.	Fishing Smacks.	Shirtmaker.	Shoeblack Brigade.	Shoemaker.	Tailor.	Wheelwright.	Total.	Domestic Service.	Other Occupations.	
Central London District	..	..	..	..	..	4	2	..	42	63	..	12[a]
South Metropolitan District.	..	..	..	..	..	21	4	..	61	74	..	26[b]
North Surrey District	..	..	..	..	..	5	2	..	57	39	3[c]	..
West London District	..	..	..	..	..	1	4	..	20	31	..	3[d]
Forest Gate District	..	..	..	..	3	7	..	..	52	27	..	..
Kensington and Chelsea District.	..	..	..	..	..	1	..	..	21	14	..	..
Brentwood District	..	..	..	..	..	1	2	..	16	38	..	4[e]
Metropolitan Asylum District, Training Ship "Exmouth."	155	109	..	..	..	..	..	..	310	..	..	..
Bethnal Green	..	..	..	1	..	1	..	..	19	19	..	2[f]
St. George-in-the-East	..	..	1	..	2[g]	..	..	..	9	9	..	1
Holborn	..	..	..	..	..	2	1	..	22	10	1[h]	..
Islington	..	..	..	..	..	1	1	..	17	29	1[i]	..
Lambeth	..	..	..	..	..	..	..	..	20	22	..	..
St. Marylebone	..	..	..	..	..	2	..	..	5	8	..[k]	..
Mile End Old Town	..	..	..	..	..	3	1	..	11	7	..	..
St. Pancras	..	..	..	..	..	4	1	..	42	41	..	..
Strand	..	..	..	..	..	..	..	..	16	9	..	1[l]
Westminster	..	..	..	..	..	1	..	1	6	13	..	
TOTAL	155	109	1	1	5	54	18	1	746	453	5	30

[a] Beyond the specified age and also bearing some physical defect.
[b] 17 over age, physically afflicted and unfit; 6 over age and incapacitated through weak intellect; 3 boys over age disorderly and refractory.
[c] Transferred to the school staff as assistants.
[d] Not sufficiently intellectual for employment.
[e] Over age.
[f] Over age and deformed.
[g] One returned to workhouse too lazy to work.
[h] Laundry.
[i] Dressmaker.
[k] Four girls were sent during the year to the refuge attached to the Cripples Home to receive "training."
[l] Over age, very bad sight, and unfit for service.
[m] Stated to be indolent.

No. 78.

List of Boarding-Out Committees authorised to act.

Name of Committee.	In what Union Established.	Name and Address of the Secretary.
Ambleside - - - (Westmoreland.)	Kendal - -	Miss Morse, Gale Lodge, Ambleside, Westmoreland.
Grasmere - - (Westmoreland.)	Kendal - -	Miss Broadley, Grasmere, Windermere, Westmoreland.
Effingham - - - (Surrey.)	Dorking - -	Mrs. Malthus, The Grange, Bookham, near Leatherhead.
Walton, Wisley, Byfleet, and Ockham. (Surrey.)	Chertsey - -	Mrs. Charles Buxton, Fox Warren, Cobham, Surrey.
Rodney Stoke - - (Somerset.)	Wells - - -	Rev. C. H. Tyler, Rodney Stoke, Weston-super-Mare.
Wavertree - - (Lancaster.)	West Derby - -	Mrs. Hermann Stolterfoht, Sandown Park, Liverpool.
Hatfield - - (Herts.)	Hatfield - -	Mrs. George Barclay, 3, Grosvenor Crescent, Belgrave Square, S.W.
Bromley - - - (Kent.)	Bromley - -	Miss Suzanne Edlmann, Hawkwood, Chislehurst, Kent.
Bradford - - (Yorks.)	Bradford (Yorks.) -	Miss Lambert, Ashton House, Bradford, Yorks.
Olveston - - - (Gloucester.)	Thornbury - -	Miss L. M. Crossman, Friezewood, Rudgeway, Bristol.
Ripley - - - (Surrey.)	Guildford - -	Miss Onslow, Ripley, Surrey.
Cobham - - - (Surrey.)	Epsom - - -	Miss Cazenove, Cobham, Surrey.
Litherland - - (Lancaster.)	West Derby - -	H. Hagger, Esq.; Litherland, Liverpool.
Waterloo - - (Lancaster.)	West Derby - -	Mrs. I. Herbert Jones, St. John's, Waterloo, Liverpool.
King's Norton - - (Worcester.)	King's Norton -	Miss Joanna Hill, 270, Hagley Road, Birmingham.
Gateacre - - - (Lancaster.)	West Derby - -	Mrs. Thornely, Baycliff, Woolton Hill, Liverpool.
Euxton - - (Lancaster.)	Chorley - -	Rev. John Worthy, Euxton, Chorley, Lancashire.
Weld Bank - - (Lancaster.)	Chorley - -	Richard Seed, Esq., Weld Bank, Chorley, Lancashire.
Hawkshead - - (Lancaster.)	Ulverstone - -	Mrs. Ogden, Lakefield, Sawrey, Windermere.
Peckham - - (Surrey.)	Camberwell - -	Fred J. Clements, Esq., 171, Queen's Road, Peckham, Surrey.
Calverton - - (Bucks.)	Potterspury - -	Charles G. Perceval, Esq., Passenham Manor, Stony Stratford.
Clifton - - (Gloucester.)	Barton Regis - -	Miss Sophia Beddoe, Mortimer House, Clifton.
Wellingboro' - - (Northampton.)	Wellingboro' -	Mrs. M. Reid Sharman, Ivy Lodge, Wellingboro'.
Thorndon Hall - - (Essex.)	Billericay - -	Rev. Jas. Bamber, Thorndon, Brentwood.

Name of Committee.	In what Union Established.	Name and Address of the Secretary.
Berkeley (Gloster.)	Thornbury	Miss S. Stackhouse, The Chantry, Berkeley.
West Horsley (Surrey.)	Guildford	Rev. H. S. de Cerjat, West Horsley Rectory.
Bebington (Chester.)	Wirrall	Mrs. Hope, 6, Addison Road, Kensington, W.
Slaidburn (York.)	Clitheroe	Mrs. Birchall, Whiteholme, Slaidburn.
Penn (Bucks.)	Amersham	Mrs. S. C. S. Grainger, Penn Vicarage, Amersham.
Walton-on-the-Hill (Lancaster.)	West Derby	Rev. Thos. Hornby, Walton Vicarage, Liverpool.
North Rode (Cheshire.)	Macclesfield	Mrs. Philips, Oak House, Sutton.
Milton Bryant (Beds.)	Woburn	Miss H. L. Synnot, Manor House, Milton Bryant.
Beddington (Surrey.)	Croydon	Mrs. Baylie, Manor Road, Wallington, Carshalton.
Eversholt (Beds.)	Woburn	Rev. W. S. Baker, Eversholt Rectory, Woburn.
Brighstone (Southampton.)	Isle of Wight	Miss Jane Wilson, Brighstone, Newport, I.W.
Nottingham (Notts.)	Nottingham	Miss F. Enfield, 29, Arboretum Street, Nottingham.
Freehay (Stafford.)	Cheadle	Miss Mather, Huntley, Cheadle, Stoke-on-Trent.
Hitcham (Suffolk.)	Cosford	Rev. A. R. Grant, Hitcham Rectory, Ipswich.
Tincleton (Dorset.)	Dorchester	Miss F. K. Kindersley, Clyffe, Dorchester.
Coln St. Aldwyn (Gloster.)	Northleach	Rev. A. Kent, M.A.. Coln St. Aldwyn, Fairford, Gloucester.
Ryburgh (Norfolk.)	Walsingham	Mrs. Betha Tatham, Ryburgh Rectory, Fakenham.
Mildenhall (Suffolk.)	Mildenhall	Miss Eleanor Oliphant, Worlington Hall, Soham.
Millbrook (Beds.)	Ampthill	Miss King, Milbrook, Ampthill.
Ampthill (Beds.)	Ampthill	Mrs. Eagles, Ampthill.
Newtown and Llanidloes (Montgomery.)	Newton and Llanidloes.	Miss M. E. Marsh, Tybrith, Carno, R.S.O.
Oswaldtwisle (Lancs.)	Blackburn	Rev. B. Haslewood, Parsonage, Oswaldtwisle.
Marston Moretaine (Beds.)	Ampthill	Miss A. S. Wood, Marston Rectory. Ampthill.
Lacey Green (Bucks.)	Wycombe	Miss E. Bousfield, Loosley House, Loosley.
Cranfield (Beds.)	Ampthill	Rev. H. H. Birley, Cranfield Rectory, Newport Pagnell.
Fairfield (Lancashire.)	West Derby	Miss Cullen, 6, Deane Road, Fairfield, Liverpool.
Maulden and Pulloxhill (Beds.)	Ampthill	Miss Moore, Maulden Cottage, Maulden, Ampthill.
Fulbourne (Cambs.)	Chesterton	Miss E. S. Walker, Fulbourne, Cambridge.

Name of Committee.	In what Union Established.	Name and Address of the Secretary.
St. Helens - - - (Lancashire.)	Prescot - - -	Joseph P. Ashton, Esq., Haydock Street, St. Helens.
Hoddesdon - - (Herts.)	Ware - - -	Mrs. Robert Barclay, High Leigh, Hoddesdon.
Billington - - (Bedford.)	Leighton Buzzard -	Rev. E. Bradshaw, Billington Rectory, Leighton Buzzard.
Boston Spa - - (Yorks.)	Wetherby - -	Mrs. Jane Yewdall, Boston Spa, Tadcaster.
Southgate - - (Middlesex.)	Edmonton - -	Lady Caroline Garnier, Southgate, N.
Windermere & Troutbeck, United. (Westmoreland.)	Kendal - -	Miss Annette Preusser, Annesdale, Windermere.
Hawnes - - - (Beds.)	Ampthill - -	Miss S. C. Thynne, Hawnes Park, Bedford.
St. Albans - - (Herts.)	St. Albans - -	Mrs. Caroline M. Green, Oaklands, St. Albans.
Swyncombe - - (Oxford.)	Henley-on-Thames -	Miss Margt. Ruck-Keene, Swyncombe, Henley-on-Thames.
Thames Ditton - - (Surrey.)	Kingston - -	Rev. E. H. Rogers, The Vicarage, Thames Ditton.
Great Houghton - - (Northampton.)	Hardingstone -	Hon. and Rev. W. H. Spencer, Rectory, Great Houghton.
Clifton Hampden - - (Oxford.)	Abingdon - -	Mrs. Anne Pott, Clifton Hampden, Abingdon.
Formby - - - (Lancaster.)	Ormskirk - -	Mrs. H. D. Bushby, Traphill, Formby.
Cambridge - - - (Cambs.)	Cambridge - -	Mrs. Susan Cayley, Garden House, Cambridge.
Surbiton - - - (Surrey.)	Kingston - -	Mrs. Elizabeth Howell, Durrington Lodge, Surbiton.
Ongar - - - (Essex.)	Ongar - - -	Mrs. Mary Steward, Shelley, Ongar, Essex.
Spelsbury - - (Oxon.)	Chipping Norton -	Rev. T. Childe Barker, Spelsbury Vicarage, Enstone, Oxon.
Stepleton - - - (Dorset.)	Blandford - -	Hon. Miss Blanche C. Pitt, Stepleton, Blandford.
Hursley - - (Hants)	Hursley - -	Miss Marion J. Young, Vicarage, Hursley.
Abbots Langley - - (Herts.)	Watford - -	Mrs. W. Jones Lloyd, Langleybury, Watford.
Fishpool - - (Lancashire.)	Bury.	D. Walmsley, Esq., Fishpool, Bury.
Tetworth - - - (Huntingdon.)	St. Neots - - -	Miss A. Vixian Kaye, Tetworth Hall, Sandy, Bedfordshire.
Flitwick - - - (Bedford.)	Ampthill -	Mrs. Lucy Ashpitel, Flitwich Vicarage, Ampthill.
Corsham and Atworth - (Wilts.)	Chippenham and Bradford (Wilts).	A. C. Mitchell, Esq., The Ridge, Corsham, Wilts.
Foulmere - - - (Cambs.)	Royston - -	Mrs. E. L. Beldam-Johns, Foulmere Manor, near Royston.
Winchmore Hill - (Middlesex.)	Edmonton - -	Miss Edith Busk, Ford's Grove, Winchmore, N.
Marsh Gibbon - - (Bucks.)	Buckingham.	Mrs. Holmes, Marsh Gibbon Rectory. Bicester.
Hatfield Broad Oak - (Essex.)	Dunmow.	Lady Selwin-Ibbetson, Down Hall, Harlow.

Appendix F.

Expenditure authorised by the Board for purchasing, erecting, altering, or enlarging Workhouses, &c. in accordance with Plans approved by the Board or for purchasing Land for sites or other purposes.

Ditto District Schools and Asylums.

Sale of Property of Unions, Parishes, and District Schools, and Appropriation of Produce.

Deeds Approved, Sealed, and Registered.

		Page
No. 79.	Workhouses, &c., Expenditure in purchasing, building, altering, or enlarging, &c., Year 1882 - - - -	286
No. 80.	District Asylums and Schools ditto, Year 1882 -	293
No. 81.	Sale of Union and Parish Property and Appropriation of Produce, Year 1882 - - - - - -	294
No. 82.	Appropriation of Produce of Sale of District School Property, Year 1882 - - - - - - -	302
No. 83.	List of Deeds Approved, Sealed, and Registered, Year 1882 - - - - - - - - -	303

No. 79.

WORKHOUSES, SEPARATE WORKHOUSE SCHOOLS, INFIRMARIES, DISPENSARIES, RELIEF OFFICES, &c.—EXPENDITURE authorised to be incurred by Guardians in the purchase or erection of Buildings, or in additions or alterations thereto in accordance with Plans approved by the Local Government Board, and in the purchase of Land for Sites or other purposes, during the Year 1882.

(*In continuation of Report XI., page* 333.)

Unions or Parishes.	Expenditure authorised. By Order. £ s. d.	Expenditure authorised. By Letter. £ s. d.	For what particular purpose incurred.
Aberayon	..	18 6 0	Erection of stone-breaking cells for casual paupers at workhouse.
Alresford	..	63 0 0	Alterations and additions at workhouse.
Ashton-under-Lyne	..	400 0 0	Erection of walls and gatekeeper's hut at workhouse.
Aston	850 0 0	..	Purchase of land.
Ditto	800 0 0	..	Alterations and additions at workhouse for adult paupers.
Auckland	..	300 0 0	Erection of Workshops at workhouse.
Ditto	..	158 0 0	Alterations to board room at workhouse.
Barrow-in-Furness	900 0 0	..	Alterations and additions at workhouse.
Ditto	2,000 0 0	..	Erection of infirmary at workhouse.
Basford	..	28 11 7	Completion of alterations at workhouse.
Bedford	..	160 0 0	Alterations at workhouse.
Birkenhead	..	319 0 0	Erection of stables, &c. at stone yard at Oliver Street.
Birmingham	..	200 0 0	Erection of timber shed at workhouse.
Ditto	28,000 0 0	..	Erection of offices.
Blofield	..	80 0 0	Erection of wall to enclose infectious hospital at workhouse.
Bolton	1,000 0 0	..	Alterations and provision of new cooking apparatus at workhouse.
Ditto	..	150 0 0	Erection of Dutch barn at workhouse.
Bradford (Yorks.)	..	157 1 1	Alterations and additions at workhouse.
Braintree	..	500 0 0	Alterations and additions at workhouse laundry.
Brentford	..	210 0 0	Erection of disinfecting apparatus at workhouse.
Bromyard	..	199 7 2	Additions and alterations at workhouse.
Burnley	450 0 0	..	Purchase of leasehold interest in land and premises.
Ditto	..	92 10 0	Erection of clock at workhouse.
Ditto	715 0 0	..	Alterations and additions at workhouse laundry.
Burton-upon-Trent	..	165 0 0	Erection of temporary sleeping ward at workhouse.
Canterbury	600 0 0	..	Purchase of land.
Ditto	4,000 0 0	..	Erection of infirmary at workhouse.
Carlisle	150 17 7	..	Completion of erection of steam cooking and heating apparatus at workhouse.
Carried forward	39,465 17 7	3,200 15 10	

Workhouses, Separate Workhouse Schools, Infirmaries, Dispensaries, Relief Offices, &c.—*continued.*

Unions or Parishes.	Expenditure authorised. By Order.	Expenditure authorised. By Letter.	For what particular purpose incurred.
	£ s. d.	£ s. d.	
Brought forward -	39,465 17 7	3,200 15 10	
Carlisle - - -	..	52 0 0	Erection of play shed, and flagging yard at workhouse.
Ditto - - -	..	48 0 0	Erection of wall at workhouse.
Cheltenham - - -	5,000 0 0	..	Purchase of land and premises ("The Elms") for the purposes of a school.
Ditto - - -	2,000 0 0	..	Alterations and additions at "The Elms."
Chepstow - -	..	14 10 0	Alterations at workhouse.
Chertsey - - -	500 0 0	..	Purchase of land.
Ditto - - -	..	86 0 0	Addition at workhouse.
Chesterfield - - -	1,400 0 0	..	Alterations and additions at workhouse.
Ditto - - -	410 10 5	..	Completion of erection and furnishing of separate workhouse school at Brampton.
Ditto - - -	15 11 8	..	Completion of erection of casual wards.
City of London - -	..	237 0 0	Alterations at union offices to provide dispensary.
Cricklade and Wootton Bassett.	..	165 0 0	Alterations at workhouse.
Croydon - - -	..	414 10 0	Erection of additional iron hut at workhouse.
Ditto - - -	10,000 0 0	..	Completion of erection of infirmary at May Day Road.
Derby - - -	..	250 0 0	Erection of infirmary at workhouse.
Dewsbury - - -	1,500 0 0	..	Erection of entrance lodges and gates, boundary walls and fences on land adjoining workhouse.
Dorchester - - -	..	650 0 0	Alterations and additions at workhouse.
Drayton - - -	65 0 0	..	Purchase of land.
Durham - - -	..	16 17 0	Completion of alterations at workhouse.
Ditto - - -	..	112 19 0	Alterations and additions at workhouse.
Ecclesall Bierlow - -	..	272 0 0	Erection of additional boiler at workhouse.
Edmonton - - -	900 0 0	..	Erection of additional school room and a temporary building at Enfield schools.
Ditto - - -	4,000 0 0	..	Additional building at workhouse infirmary.
Ditto - - -	12,000 0 0	..	Purchase of land.
Epping - - -	7,000 0 0	..	Alterations and additions at workhouse.
Epsom - - -	11,000 0 0	..	Erection of new infirmary and enlargement of board room and offices at workhouse.
Fordingbridge - -	230 0 0	..	Purchase of land.
Ditto - - -	50 0 0	..	Ditto.
Frome - - -	..	287 0 0	Erection of additional casual wards.
Fulham - - -	..	120 0 0	Additions at casual wards at workhouse.
Fylde (The) - -	2,000 0 0	..	Erection of additional casual wards.
Carried forward -	97,536 19 8	5,933 11 10	

Workhouses, Separate Workhouse Schools, Infirmaries, Dispensaries, Relief Offices, &c.—*continued.*

Unions or Parishes.	Expenditure authorised. By Order.	Expenditure authorised. By Letter.	For what particular purpose incurred.
	£ s. d.	£ s. d.	
Brought forward -	97,536 19 8	5,933 11 10	
Godstone - - -	..	56 0 0	Additions at workhouse.
Hackney - - -	1,148 0 0	..	Completion of additions to infirmary.
Ditto - - -	313 0 0	..	Completion of laundry at workhouse.
Ditto - - -	450 0 0	..	Purchase of premises.
Haltwhistle - - -	..	28 0 0	Works of water supply at workhouse.
Hambledon - - -	..	100 7 6	Alteration of porter's lodge at workhouse.
Haslingden - - -	30 0 0	..	Purchase of land.
Ditto - - -	200 0 0	..	Improvement of roadway to workhouse.
Ditto - - -	..	300 0 0	Boring, &c. for water supply at workhouse.
Hastings - - -	..	70 0 0	Apparatus for heating wards at workhouse infirmary.
Hendon - - -	20,500 0 0	..	Erection of dining hall and buildings, and alterations at workhouse.
Ditto - - -	2,000 0 0	..	Fitting up and furnishing dining hall and buildings at workhouse.
Hereford - - -	..	70 0 0	Erection of water tank at workhouse.
Hexham - - -	3,000 0 0	..	Alterations and additions at workhouse.
Holborn - - -	..	350 0 0	Drainage at Mitcham schools.
Ditto - - -	2,600 0 0	..	Construction of artesian well at City Road workhouse.
Keighley - - -	1,900 0 0	..	Purchase of land and premises.
Kendal - - -	..	26 1 4	Completion of casual wards.
King's Norton - -	2,000 0 0	..	Erection of infectious wards and boundary wall at workhouse.
Lanchester - - -	2,240 0 0	..	Completion of alterations and additions at workhouse.
Ditto - - -	..	416 0 0	Enlargement and alteration of workhouse infirmary.
Leeds - - -	..	121 14 5	Completion of alterations and additions at workhouse.
Ledbury - - -	..	62 0 0	Erection of cells for casual paupers.
Leek - - - -	..	316 18 0	Erection of new casual wards for males at workhouse.
Leicester - - -	3,706 0 0	..	Purchase of land.
Ditto - - -	1,600 0 0	..	Ditto.
Ditto - - -	..	100 0 0	Alterations at workhouse.
Ditto - - -	5,500 0 0	..	Erection of board room and offices.
Lewes - - -	..	144 10 0	Additions to infectious wards at workhouse.
Lewisham - - -	105 0 0	..	Completion of temporary iron building.
Ditto - - -	34,366 0 0	..	Erection of additional buildings. Alterations and additions at workhouse.
Ditto - - -	6,207 0 0	..	Fitting up and furnishing additional buildings at workhouse.
Ditto - - -	1,250 0 0	..	Erection of relief station for No. 1 District.
Carried forward -	191,651 19 8	8,095 3 1	

Workhouses, Separate Workhouse Schools, Infirmaries, Dispensaries, Relief Offices, &c.—*continued.*

Unions or Parishes.	Expenditure authorised. By Order.	Expenditure authorised. By Letter.	For what particular purpose incurred.
	£ s. d.	£ s. d.	
Brought forward -	191,651 19 8	8,095 3 1	
Lichfield - - -	200 0 0	..	Erection of stone-breaking cells at workhouse.
Landovery - - -	..	94 11 6	Alterations at workhouse.
Lunesdale - - -	..	74 5 0	Completion of drainage improvements at workhouse.
Malton - - -	..	99 10 0	Erection of enclosing walls and alterations upon land leased from Earl Fitzwilliam.
Manchester - - -	..	100 0 0	Addition at Crumpsall workhouse.
Ditto - - -	..	241 0 0	Provision of fuel economiser for boilers at Crumpsall workhouse.
Ditto - - -	..	130 0 0	Completion of erection of chimney at Swinton schools.
Ditto - - -	950 0 0	..	Re-paving boy's play yard at Swinton schools.
Merthyr Tydfil - -	..	20 0 0	Erection of wall at Aberdare schools.
Mile End Old Town -	4,296 0 0	..	Provision of heating and cooking apparatus and execution of other works at separate infirmary.
Ditto - - -	2,500 0 0	..	Fitting up and furnishing infirmary.
Morpeth - - -	..	10 0 0	Alterations at workhouse.
Ditto - - -	..	20 0 0	Alterations to board room.
Mutford and Lothingland -	..	161 0 0	Additions and alterations at workhouse.
Neath - - -	..	200 0 0	Alterations and additions at cottage homes.
Newcastle-upon-Tyne -	920 0 0	..	Erection of infant's day room, &c. at workhouse.
Ditto - - -	55 5 0	..	Erection of boundary wall in connection with casual wards.
Ditto - - -	124 15 0	..	Towards cost of paving Back Crossley Terrace, adjoining workhouse.
Ditto - - -	10,000 0 0	..	Alterations at workhouse and union offices.
Newcastle-under-Lyme -	..	257 3 8	Widening and deepening well at workhouse.
Newhaven - - -	..	133 0 0	Additions at workhouse.
Newport Pagnell - -	..	35 16 0	Addition at workhouse.
Newport (Salop) - -	..	340 5 6	Alterations and additions at workhouse.
Ditto - - -	250 0 0	..	Ditto.
North Aylesford - -	..	216 10 0	Erection of oven at workhouse.
Northampton - -	1,391 0 0	..	Erection of temporary small-pox hospital.
Ditto - - -	..	248 0 0	Alterations at workhouse.
Nottingham - - -	..	80 10 0	Alterations to relief office at workhouse.
Ditto - - -	625 10 0	..	Completion of alterations at separate workhouse school.
Ditto - - -	..	35 0 0	Alterations at workhouse.
Oldham - - -	750 0 0	..	Alterations at offices at workhouse.
Ormskirk - - -	950 0 0	..	Purchase of land.
Carried forward -	214,464 9 8	10,589 14 9	

Workhouses, Separate Workhouse Schools, Infirmaries, Dispensaries, Relief Offices, &c.—*continued.*

Unions or Parishes.	Expenditure authorised. By Order.	Expenditure authorised. By Letter.	For what particular purpose incurred.
	£ s. d.	£ s. d.	
Brought forward -	214,464 9 8	10,589 14 9	
Ormskirk - - -	2,200 0 0	..	Purchase of land and premises.
Paddington - - -	..	33 0 0	Addition at workhouse.
Plympton Saint Mary -	290 0 0	..	Purchase of land.
Reigate - - -	250 0 0	..	Addition at workhouse.
Rochdale - - -	1,200 0 0	..	Additions to imbecile wards at workhouse.
Romford - - -	..	90 0 0	Alterations at workhouse.
Ross - - - -	..	29 15 0	Alterations at infirmary at workhouse.
Runcorn - - -	216 0 0	..	Erection of new engine and boiler house and new entrance gates at workhouse.
Ditto - - -	384 0 0	..	Completion of alterations and additions at infirmary at workhouse.
Ruthin - - -	..	30 0 0	Erection of workshed for casual paupers at workhouse.
Saint George's - -	6,000 0 0	..	Completion of purchase of land adjoining Fulham Road.
Ditto - - -	12,243 0 0	..	*Purchase of land and premises at Wallis Yard and Buckingham Palace Road.
Ditto - - -	34,546 0 0	..	Alterations and additions at Fulham Road workhouse.
Saint Giles in the Fields and Saint George, Bloomsbury.	4,500 0 0	..	Completion of re-construction of workhouse.
Saint John, Hampstead -	2,600 0 0	..	Purchase of land and premises at New End, Hampstead.
Saint Leonard, Shoreditch	1,037 0 0	..	Alterations and additions at infirmary laundry.
Ditto - - -	..	200 0 0	Alterations at relief offices in Hoxton Street.
Ditto - - -	6,275 0 0	..	Purchase of land and premises for additional accommodation for indoor and casual poor.
Saint Luke, Chelsea -	1,380 0 0	..	Purchase of premises.
Ditto - - -	1,200 0 0	..	Purchase of leasehold interest in premises.
Ditto - - -	42 10 0	..	Purchase of interest in premises.
Saint Mary, Islington -	4,225 0 0	..	Erection of relief office and dispensary and other buildings.
Ditto - - -	42,000 0 0	..	Purchase of land, workhouse, and buildings, known as the Union Workhouse of the City of London Union, situate in the parish.
Ditto - - -	2,360 0 0	..	Purchase of furniture in or upon land and buildings last-mentioned.
Ditto - - -	679 0 0	..	Additional nursery accommodation at St. John's Road Workhouse.
Ditto - - -	640 0 0	..	Additional furniture and fittings and provision of new cooking apparatus at Shadwell Road Workhouse.
Saint Mary, Lambeth -	5,250 0 0	..	Completion of alterations and additions at Lower Kennington Lane Workhouse.
Ditto - - -	7,500 0 0	..	Further alterations and additions at Lower Kennington Lane Workhouse.
Ditto - - -	2,500 0 0	..	Purchase of land.
Carried forward -	350,981 19 8	10,972 9 9	

* Subject to an annual rentcharge of 473*l.* until the 25th March 1886.

Workhouses, Separate Workhouse Schools, Infirmaries, Dispensaries, Relief Offices, &c.—*continued.*

Unions or Parishes.	Expenditure authorised. By Order.	Expenditure authorised. By Letter.	For what particular purpose incurred.
	£ s. d.	£ s. d.	
Brought forward -	350,981 19 8	10,972 9 9	
Saint Mary, Lambeth -	4,550 0 0	..	Purchase of land.
Saint Marylebone - -	86 0 0	..	Completion of purchase of land.
Ditto - - -	17,000 0 0	..	Completion of erection of infirmary at Notting Hill.
Saint Matthew, Bethnal Green.	102 0 0	..	Completion of erection of mortuary and new contagious disease wards at workhouse.
Saint Olaves - -	..	650 0 0	Alterations and additions at infirmary.
Saint Pancras - -	1,300 0 0	..	Purchase of leasehold interest in premises at Clarendon Square.
Salford - - -	..	14 0 0	Erection of additional piggeries and alterations at workhouse.
Sculcoates - - -	1,434 0 0	..	Purchase of land.
Sedbergh - - -	..	9 4 9	Addition at workhouse.
Settle - - - -	..	80 0 0	Laying new water mains, &c. at workhouse.
Ditto - - -	..	70 0 0	Alterations in drainage of workhouse.
Ditto - - -	..	33 5 0	Provision of new pipes in connection with heating apparatus.
Sheffield - - -	7,786 0 0	..	Completion of workhouse.
Stockport - - -	..	37 10 0	Additions at workhouse.
Ditto - - -	..	200 0 0	Paving yards and passages at workhouse.
Stoke-upon-Trent - -	..	142 0 0	Works for the storage and distribution of rain-water at workhouse.
Ditto - - -	..	120 0 0	Erection of drying closet at workhouse.
Ditto - - -	..	200 0 0	Erection of boiler house at workhouse.
Ditto - - -	310 0 0	..	Purchase of premises.
Ditto - - -	1,000 0 0	..	Erection of relief station and vaccination station.
Stone - - - -	..	47 15 0	Enlargement of schoolroom at workhouse.
Stourbridge - - -	..	96 2 0	Alterations and additions at workhouse.
Tenterden - - -	2,300 0 0	..	Erection of infirmary at workhouse.
Tewkesbury - - -	..	33 0 0	Alterations at workhouse.
Thetford - - -	500 0 0	..	Erection of steam cooking and heating apparatus.
Thingoe - - -	4,000 0 0	..	Erection of new schools at workhouse.
Toxteth Park - -	580 0 0	..	Alterations at workhouse.
Ditto - - -	..	85 0 0	Alterations at public offices.
Ditto - - -	..	357 0 0	Drainage works at workhouse.
Ulverstone - - -	72 14 7	..	Completion of erection of additional casual wards.
Carried forward	392,002 14 3	13,147 6 6	

* Sum to be determined by the Local Government Board.

Workhouses, Separate Workhouse Schools, Infirmaries, Dispensaries, Relief Offices, &c.—*continued.*

Unions or Parishes.	Expenditure authorised. By Order.	Expenditure authorised. By Letter.	For what particular purpose incurred.
	£ s. d.	£ s. d.	
Brought forward -	392,002 14 3	13,147 6 6	
Warwick - - -	700 0 0	..	Alterations and additions at workhouse.
Warrington - - -	125 18 4	..	Purchase of land.
Ditto - - -	943 2 6	..	Completion of erection of school buildings.
Ditto - - -	2,130 19 2	..	Additions and erection of boundary wall at school buildings.
Ditto - - -	800 0 0	..	Furnishing school buildings.
Wandsworth and Clapham	10,000 0 0	..	Purchase of land.
West Bromwich - -	17,300 0 0	..	Erection of new infirmary.
West Derby - - -	1,225 0 0	..	Flagging and paving yards at school at Walton-on-the-Hill workhouse.
Ditto - - -	235 0 0	..	Construction of framework to corridors connecting school buildings at Walton-on-the-Hill workhouse.
West Hampnett - -	1,300 0 0	..	Completion of alterations and additions at workhouse.
Wigton - - -	..	12 0 0	Addition at workhouse.
Wolverhampton - -	85 13 0	..	Completion of additions and alterations at workhouse.
Woolwich - - -	260 0 0	..	Water softening apparatus and repairing hot-water pipes at workhouse.
Wortley - - -	..	155 0 0	Additions at workhouse.
York - - -	728 11 8	..	Alterations at casual wards.
Totals - -	427,836 18 11	13,314 6 6	
	£441,151 5 5		
Amount expended in previous years, brought forward - - -	£12,669,837 6 7		
Total amount authorised to be expended - -	£13,110,988 12 0		

No. 80.

DISTRICT ASYLUMS AND DISTRICT SCHOOLS.—EXPENDITURE authorised to be incurred by Managers in the purchase or erection of Buildings, or in additions or alterations thereto, in accordance with Plans approved by the Local Government Board, and in the purchase of Land for Sites or other purposes, during the Year 1882.

(*In continuation of Report XI., page* 334.)

DISTRICTS.	Expenditure authorised.		For what particular purpose incurred.
	By Order.	By Letter.	
	£ s. d.	£ s. d.	
Metropolitan Asylum District	2,200 0 0	..	Erection of cottages for officers at Darent 1 Asylum.
Central London School District	..	300 0 0	Construction of gallery across the roof of school.
Brentwood School District -	..	350 0 0	Alterations at schools.
Forest Gate School District -	505 13 1	..	Completion of erection of receiving wards, and alterations and additions at school.
Ditto ditto -	265 18 2	..	Provision of additional bathing accommodation.
Ditto ditto -	171 15 0	..	Additions at schools.
Totals - - -	3,143 6 3	650 0 0	
	£3,793 6 3		
Amount brought from last Report, page 335 - -	£1,942,795 2 9		
Total amount authorised to be expended - -	£1,946,588 9 0		

No. 81.—Sale of Union and Parish Property and Investment or Appropriation of Net Produce, during the Year 1882.

(*In continuation of Report XI., page* 336.)

Unions.	Parishes.	Amount of Purchase Money.		Net Produce.			
				Investment in Consols.		Appropriation.	
		Sales previously reported, with reference to the Number of the Report.	Sales completed during the Year 1882.	Investments previously reported, with reference to the Number of the Report.	Sums directed to be invested until further Order.	Sums directed to be Appropriated.	Nature of Appropriation.
			£ s. d.		£ s. d.	£ s. d.	
Abergavenny	Llanthewy Skirrit	-	40 0 0	-	35 7 0	—	Dividends in aid of poor rates.
Aylsham	Thwaite	-	70 0 0	-	69 12 0	—	Ditto.
Barton-upon-Irwell	Urmston	-	—	£155 0s. 1d. Vide Report XIII. (P.L.B.)	—	*140 18 9	Sale of so much stock as may from time to time be required to discharge proportionate share of parish in instalments of principal in respect of workhouse loan.
							Dividends in aid of poor rates.
Basford	-	-	—	£739 16s. 7d. Vide Report XI. (L.G.B.)	—	93 11 7	Cost of recent alterations at workhouse.
Basingstoke	Weston Patrick	-	55 0 0	-	41 8 11	—	Dividends in aid of poor rates.
Beaminster	Cheddington	£31 10s. Vide Report XI. (L.G.B.)	—	-	28 6 10	—	Ditto.
Brackley (Brackley Highway District).	Kings Sutton	-	—	-	—	45 4 2	Cost of improving footpaths.
Buckingham	Maids Morton	-	8 0 0	-	—	8 0 0	To be paid to highway surveyor and applied by him towards cost of new drain in the main street.
Burton-upon-Trent	Barton-under-Needwood.	-	‡361 10 11	—	—	—	
Carried forward		£	534 10 11	-	174 14 9	287 14 6	

* Amount of Stock. † Exhausted parish land sold by highway board as surveyors of highways for Kings Sutton. ‡ Produced by the sale of exhausted parish land.

Sale of Property and Investment or Appropriation of Net Produce—*continued.*

Unions.	Parishes.	Amount of Purchase Money.		Net Produce.			
				Investment in Consols.		Appropriation.	
		Sales previously reported, with reference to the Number of the Report.	Sales completed during the Year 1882.	Investments previously reported, with reference to the Number of the Report.	Sums directed to be invested until further Order.	Sums directed to be Appropriated.	Nature of Appropriation.
			£ s. d.		£ s. d.	£ s. d.	
Brought forward			534 10 11		174 14 9	287 14 6	
Cannock	Norton	£35 Vide Report X. (L.G.B.)	*333 6 8		445 18 6	—	Dividends in aid of poor rates.
		£133 6s. 8d. Vide Report XI. (L.G.B.)	333 6 8		333 6 8	—	
Carnarvon	Saint Peter's, Newborough.	£160 Vide Report IX. (L.G.B.)	—		—	80 0 0	To be paid to the burial board of the parish, and applied by them in payment of the cost of land for a burial ground.
Chesterton	Fulbourn	†£137 12s. 6d. Vide Report XI. (L.G.B.)	—		—	128 2 6	Towards cost of repair of highways in parish during two years from date of Order.
Ditto	Hauxton		—		—	‡41 0 0	To be applied by the surveyors of the highways towards cost of conversion of an open ditch into a culvert.
City of London			42,000 0 0		—	42,000 0 0	In part discharge of workhouse loan, future instalments being proportionately reduced.
			2,399 10 6		—	§2,399 10 6	To the credit of the Common Fund of the Union.
Dewsbury	Mirfield	£75 Vide Report XI. (L.G.B.)	—		71 10 11	—	Dividends in aid of poor rates.
Downham	Wiggenhall, Mary Magdalene.	£46 Vide Report XI. (L.G.B.)	—		45 5 0	—	Ditto.
East Retford	Lound		34 15 2		34 15 2	—	Ditto.
Ditto	Ordsall		79 0 0		74 9 0	—	Ditto.
Carried forward		£	45,714 9 11		1,180 0 0	44,936 7 6	

* Completed in 1881.
‡ Part of produce of exhausted parish land sold by highway surveyors for the parish.
† Produced by the sale of exhausted parish land.
§ Realised by the sale of machinery, fixtures, fittings, and furniture.

Sale of Property and Investment or Appropriation of Net Produce—*continued.*

Unions.	Parishes.	Amount of Purchase Money.		Net Produce.			
				Investment in Consols.		Appropriation.	
		Sales previously reported, with reference to the Number of the Report.	Sales completed during the Year 1882.	Investments previously reported, with reference to the Number of the Report.	Sums directed to be invested until further Order.	Sums directed to be Appropriated.	Nature of Appropriation.
			£ s. d.		£ s. d.	£ s. d.	
Brought forward -		- - -	45,714 9 11	- - -	1,180 0 0	44,936 7 6	
Farnham - - -	Ash - - -	*£139 Vide Report XI. (L.G.B.)	—	- - -	115 5 8	—	To be paid to the highway board for the district of Farnham, and to be invested by them. Dividends in aid of the highway rate in the parish of Ash.
Godstone - - -	Titsey - - -	- - -	800 0 0	- - -	800 0 0	—	Dividends in aid of poor rates.
Guildford - - -	Puttenham - -	- - -	80 0 0	- - -	—	68 6 2	To be paid to the burial board of the parish, and applied by them towards providing and laying out site for a burial ground.
Havant - - -	- - -	£180 Vide Report VIII. (L.G.B.)	—	- - -	—	†182 17 1	Investment in Consols, and sufficient part to be sold out from time to time to discharge instalments of principal of a workhouse loan. Dividends in aid of common fund.
Huddersfield - - -	Longwood - -	- - -	30 10 0	—	—	—	
Keighley - - -	- -	- - -	*50 0 0	—	—	—	
Lymington - - -	- - -	- - -	§40 4 2	- - -	40 4 2	—	Dividends towards Common Fund.
Manchester (Separate Township).	- -	£95,000 Vide Report XI. (L.G.B.)	—	- - -	—	665 0 0	Alterations and additions at Crumpsall workhouse and its infirmary.
Carried forward -		- - - £	46,715 4 1	- - -	2,135 9 10	45,852 10 9	

* Produced by the sale of exhausted parish lands.
‡ Exhausted parish lands sold by highway board as surveyors of highways of Long Ditton with Talworth.
† £182 17*s.* 1*d.*, of which £142 was reported in Report X. (L.G.B.)
§ Sale of materials.

Sale of Property and Investment or Appropriation of Net Produce—*continued.*

Unions.	Parishes.	Amount of Purchase Money.		Net Produce.			
				Investment in Consols.		Appropriation.	
		Sales previously reported, with reference to the Number of the Report.	Sales completed during the Year 1882.	Investments previously reported, with reference to the Number of the Report.	Sums directed to be invested until further Order.	Sums directed to be Appropriated.	Nature of Appropriation.
	Brought forward -	- - -	£ s. d. 46,715 4 1	- - -	£ s. d. 2,135 9 10	£ s. d. 45,852 9 10	
Manchester (Separate Township)—*continued.*	- - -	- - -	—	- - -	—	3,000 0 0	Towards cost of alterations and additions to the buildings in New Bridge Street belonging to the guardians, and in the erection of casual wards, &c.
						4,838 10 11	Alterations, additions, &c. at Swinton Schools.
Market Harborough -	Lubbenham - -	- - -	84 0 0	——	—	—	
Mere - - -	Kilmington - -	- - -	16 0 0	——	—	—	
Meriden - - -	Fillongley - -	- - -	20 0 0	- - -	16 15 6	—	Dividends to be applied towards expenses of maintaining the ornamental ground recently laid out in the parish.
Newcastle-in-Emlyn -	Llandyssil - -	- - -	—	£54 Vide Report XI. (L.G.B.)	—	£52 19 0 (Stock to be sold.)	The amount produced to be paid to the Highway Board for the Highway District of Llandyssil to be applied towards the cost of a bridge at Tregroes.
Oundle - - -	Lutton - - -	- - -	39 0 0	- - -	31 6 0	—	Dividends in aid of poor rates.
Pontefract - -	Balne - - -	- - -	29 0 0	- - -	—	24 3 0	To be invested in Consols, and a sufficient part to be sold out from time to time to discharge the share of the township in the instalments of the principal to become due in respect of certain workhouse loans. Dividends in aid of poor rates.
	Carried forward - - - - £		46,903 4 1	- - -	2,183 11 4	53,768 2 9	

Sale of Property and Investment or Appropriation of Net Produce—*continued.*

Unions.	Parishes.	Amount of Purchase Money.		Net Produce.			
				Investment in Consols.		Appropriation.	
		Sales previously reported, with reference to the Number of the Report.	Sales completed during the Year 1882.	Investments previously reported, with reference to the number of the Report.	Sums directed to be invested until further Order.	Sums directed to be Appropriated.	Nature of Appropriation.
	Brought forward -	- - -	£ s. d. 46,903 4 1	- - -	£ s. d. 2,183 11 4	£ s. d. 53,768 2 9	
Pontefract - - -	Hensall - -	- - -	—	£60 16*s.* 8*d.* Vide Report — (P.L.B.)	—	£47 4 0 (Stock.)	A sufficient part to be sold from time to time to discharge the proportionate share of the township of the instalments of principal and interest to become due in respect of certain workhouse loans. Dividends in aid of poor rates.
Ditto - -	Knottingley - -	- - -	—	£310 14*s.* 6*d.* Vide Report XXI. (P.L.B.)	—	252 0 0	To be paid to the treasurer of the Knottingley School Board to be applied towards cost of site for and erection of school buildings.
Ditto - - -	Womersley - -	- - -	30 0 0	- - -	—	25 10 0	To be paid to the burial board of the parish, and applied by them towards providing and laying out site for a burial ground.
Potterspury - -	Passenham - -	- - -	—	£443 9*s.* 4*d.* Vide Report VII. (P.L.Crs.)	—	£73 3 7 (Stock to be sold).	The amount produced to be paid to the managers of the Passenham parochial school, to be applied by them towards cost of additional land for the school and making certain alterations thereat.
Preston - - -	Walton-le-Dale -	- - -	250 0 0	—	—	—	
Radford (Dissolved) -	- - -	£6,344 Vide Report XI. (L.G.B.)	—	- - -	—	3,112 18 0	To be applied to payment of balances of workhouse loans.
Rochford - - -	Thundersley - -	- - -	25 0 0	- - -	20 1 6	—	Dividends in aid of poor rates.
	Carried forward - -	- - -	47,208 4 1	- - -	2,203 12 10	57,278 18 4	

Sale of Property and Investment or Appropriation of Net Produce—*continued.*

Unions.	Parishes.	Amount of Purchase Money.		Net Produce.			
				Investment in Consols.		Appropriation.	
		Sales previously reported, with reference to the Number of the Report.	Sales completed during the Year 1882.	Investments previously reported, with reference to the Number of the Report.	Sums directed to be invested until further Order.	Sums directed to be Appropriated.	Nature of Appropriation.
			£ s. d.		£ s. d.	£ s. d.	
Brought forward -		- - -	47,208 4 1	- - -	2,203 12 10	57,278 18 4	
Rothbury - -	- - -	- - -	20 0 0	——	—	—	
Saffron Walden - -	Debden - -	- - -	—	£594 Vide Report VIII. (L.G.B.)	—	276 7 5	To be applied to cost of enlarging Debden Parish School, and towards payment of law costs and other expenses in connexion therewith.
				£20 Vide Report X. (L.G.B.)	307 3 4	—	Dividends in aid of poor rates.
Saint Georges - -	Saint Margaret and Saint John - the - Evangelist, Westminster.	- - -	55,000 0 0	——	—	2,000 0 0	To be placed in the accounts of the guardians to their credit by way of compensation under section 3 of the Poor Law Amendment Act, 1869, for improvements at the Marloes Road Workhouse. The application of the amount to await further Order.
						21,000 0 0	Towards cost of parochial offices, and in payment of cost of redemption of land tax in respect of site.
					45,858 13 4	—	Dividends in aid of poor rates.
						29,021 5 3	To be applied in discharge of the debt of that amount due to the Westminster Improvement Commissioners and their mortgagees under the Westminster Improvement Act, 1847.
Ditto - -	Ditto - -	£300 4*s.* 0*d.* Vide Report IX. (L.G.B.)	—	- - -	114 2 10 *5 0 0	—	Dividends in aid of poor rates.
Carried forward -		- - - £	102,228 4 1	- - -	48,188 12 4	109,576 11 0	

* This was a re-investment (see note at foot of table at p. 340 of Report XI. of the Local Government Board).

Sale of Property and Investment or Appropriation of Net Produce—*continued.*

Unions.	Parishes.	Amount of Purchase Money.		Net Produce.			
				Investment in Consols.		Appropriation.	
		Sales previously reported, with reference to the Number of the Report.	Sales completed during the Year 1882.	Investments previously reported, with reference to the Number of the Report.	Sums directed to be invested until further Order.	Sums directed to be Appropriated.	Nature of Appropriation.
			£ s. d.		£ s. d.	£ s. d.	
Brought forward -		- - -	102,228 4 1	- - -	48,488 12 4	109,576 11 0	
Saint George's—*cont.* -	Saint Margaret and Saint John-the-Evangelist, Westminster—*cont.*	£2,200 Vide Report XI. (L.G.B.)	—	- - -	—	380 0 0	Compensation to tenants of a portion of the property in Wallis' Yard purchased by the guardians.
Sedbergh - - -	Sedbergh - -	- - -	—	£31 19*s.* 9*d.* Vide Report XVIII. (P.L.B.)	—	£32 3 6 (Stock to be sold.)	The amount produced to be applied towards cost of fire-extinguishing apparatus.
Sedgefield - - -	Woodham - -	- - -	5 0 0	- - -	*5 0 0	—	Dividends in aid of poor rates.
South Shields - -	- - -	£6,020 Vide Report XI. (L.G.B.)	—	- - -	—	650 0 0	To be applied to cost of relief offices and committee rooms.
						2,100 0 0	To be applied to cost of completion of erection of new workhouse.
						550 0 0	To be applied to cost of land and premises.
						1,384 0 0	To be applied towards cost of erection of board room and union offices.
Southwell - - -	Bathley - -	£42 Vide Report XI. (L.G.B.)	—	- - -	32 1 8	—	Dividends in aid of poor rates.
Staines - - -	Harlington - -	- - -	—	- - -	†299 9 6	—	To be paid over to the surveyors of highways for the highway parish of Harlington, and to be invested by them. Dividends in aid of highway rate.
Stamford - - -	Ryhall - - -	- - -	100 0 0	——	—	—	
Carried forward -		- - -	102,333 4 1	- - -	48,825 3 6	114,672 14 6	

* Deposited in Post Office Savings Bank at Sedgefield.

† Produced by the sale of exhausted parish land.

Sale of Property and Investment or Appropriation of Net Produce—*continued.*

Unions.	Parishes.	Amount of Purchase Money.		Net Produce.			
				Investment in Consols.		Appropriation.	
		Sales previously reported, with reference to the Number of the Report.	Sales completed during the Year 1882.	Investments previously reported, with reference to the Number of the Report.	Sums directed to be invested until further Order.	Sums directed to be Appropriated.	Nature of Appropriation.
Brought forward			£ s. d. 102,333 4 1		£ s. d. 48,825 3 6	£ s. d. 114,672 14 6	
Taunton	Hatch Beauchamp		—	£151 6s. 5d. Vide Report VI. (P.L.B.)	—	£147 1 2 (Stock to be sold.)	The amount produced to be applied towards cost of works of sewerages recently executed.
Tisbury	Chilmark		50 0 0		—	50 0 0	To be applied towards payment of share of parish in the balance of principal due in respect of workhouse loan.
Towcester	Bradden	£7 10s. 0d, Vide Report XI. (L.G.B.)	—		7 10 0	—	Dividends in aid of poor rates.
Uckfield	Uckfield		—	£188 5s. 11d. Vide Report VII. (P.L.B.) £440 2s. 10d. Vide Report IX. (L.G.B.)	—	360 0 0	To be paid to the Uckfield Local Board as the burial board for cost of land to be used as a burial ground.
Witham (Dissolved)			3,000 0 0	—	—	—	
Witney	South Leigh		100 0 0		100 0 0	—	Dividends in aid of poor rates.
Worksop	Blyth	£500 Vide Report XI. (L.G.B.)	—		500 0 0	—	Ditto.
			105,483 4 1		49,432 13 6	115,229 15 8	
					164,662 9 2		
					Deduct 1,617 9 0		Total of amounts previously reported and included in amount brought from last Report.
Amounts brought from last Report, page 341			1,926,225 7 9		163,045 0 2 1,727,009 3 6		
Totals			2,031,708 11 10		1,890,054 3 8		

No. 82.

APPROPRIATION OF PRODUCE OF SALE OF DISTRICT SCHOOL PROPERTY during the year 1882.

(*In continuation of the Ninth Annual Report of the Local Government Board, Appendix No.* 85.)

Name.	Sale previously reported with reference to the Number of the Report.	Investment previously reported with reference to the Number of the Report.	Sum directed to be appropriated.	Nature of Appropriation.
North Surrey School District.	£ 800 Vide Report VII. (L. G. B.)	£ s. d. 380 7 8* Vide Report VII. (L. G. B.)	£ s. d. 380 7 8	Towards cost of alterations and addition at school.

* This sum was invested to await a further Order.

No. 83.

LIST of DEEDS APPROVED, SEALED, and REGISTERED, or APPROVED and SEALED, by the LOCAL GOVERNMENT BOARD, during the Years 1880, 1881, and 1882.*

(In continuation of list in Eleventh Annual Report, p. 342.)

	1880.	1881.	1882.	TOTAL.
I.—CONVEYANCES, LEASES, AND DECLARATIONS.				
1. Sales of Union Property	8†	6†‖	3	17¶**
2. Ditto Parish ditto	43	25	20	88¶
3. Exchanges of Union Property	–	2	2	4
4. Sales under the Sale of Exhausted Parish Lands Act, 1876 (39 & 40 Vict. c. 62.)	4	6	2	12
5. Grants of Parish Property under the School Sites Act, 1841 (4 & 5 Vict. c. 38.)	2	2	2	6
6. Grants of Parish Property under 30 & 31 Vict. c. 133. sec. 4., as addition to Churchyard	1	–	1	2
7. Purchases by Guardians	19	38	28	85
8. Leases of Union Property	–	6‡	2	8‡
9. Ditto Parish ditto	4	5§	7	16
10. Agreements and Leases to Guardians	18	17	17	52
Conveyances and Leases—				
11. To Managers of Metropolitan Asylum District	1	–	1	2
12. By ditto	–	–	–	–
13. To Managers of District Schools	2	1	3	6
14. By ditto	–	–	–	–
15. Conveyances to Parish Officers under the Vestries Act (13 & 14 Vict. c. 57.)	1	1	1	3
16. Leases and Agreements ditto	5‡	4	10	19
17. Conveyances to Parish Officers under the Parochial Offices Act (24 & 25 Vict. c. 125.)	2	1	–	3
18. Leases and Agreements ditto	13	18	22	53
19. Declaration of Appropriation under the Burial Acts of 1852 and 1853 (15 & 16 Vict. c. 85, and 16 & 17 Vict. c. 134.)	–	1	–	1
20. Declarations of Appropriation under the Burial Act of 1857 (20 & 21 Vict. c. 81.)	–	1	1	2
21. Agreements for Burial of Paupers under 18 & 19 Vict. c. 79.	1	–	2	3
22. Conveyance to Guardians of Tithe Rent-charge issuing out of Parish Property	–	–	1	1
TOTALS	124	134	125	383
II.—SECURITIES.				
1. Loans to Guardians	63	83	59	205
2. Ditto Managers of Metropolitan Asylum District	2	3	3	8
3. Ditto ditto District Schools	7	6	5	18
4. Ditto ditto Sick Asylum Districts	–	–	–	–
TOTALS	72	92	67	231
TOTAL NUMBER OF DEEDS APPROVED AND SEALED	196	226	192	614

* The deeds included in this table for the year 1882 only include those executed (except some deeds under headings Nos. 5 and 6 and 15 to 22, both inclusive,) prior to the passing of the Divided Parishes and Poor Law Amendment Act, 1882, which rendered the approval, sealing, and registration of deeds by the Board unnecessary.

† These numbers include the conveyances mentioned under the heading of "Conveyances to Parish Officers under the Parochial Offices Act (24 & 25 Vict. c. 125.)"

‡ These numbers include some of the leases mentioned under the heading of "Leases and Agreements under the Parochial Offices Act (24 & 25 Vict. c. 125.)"

§ This number includes one of the leases under the heading of "Agreements and Leases to Guardians."

‖ This number includes one of the deeds under the heading of "Purchases by Guardians."

¶ Each of these numbers includes one of the conveyances mentioned under the heading of "Purchases by Guardians."

** This number includes one of the conveyances mentioned under the heading of "Conveyances to Managers of District Schools."

Appendix G.

Vaccination.

	Page
No. 84. Vaccination. — Summary of Returns, Year ended 29th September 1882	306
No. 85. Vaccination.—Number Vaccinated in each Year from 1852 to 1872	308
No. 86. Vaccination.—Number of successful primary Vaccinations, Years 1873 to 1882	308
No. 87. Vaccination.—Digest of Vaccination Officers' Returns for 1880	309
No. 88. Vaccination.—Inspection of Public Vaccination, and an account of Awards made to Public Vaccinators out of Parliamentary Grant	325
No. 89. Vaccination.—National Vaccine Establishment and Educational Vaccination Stations	330

No. 84.

VACCINATION.—SUMMARY of Returns from 647 Unions of the Number of Persons Vaccinated and of the Number Re-vaccinated at the expense of the Poor Rates in England during the Year ended **29th September 1882.**

DIVISIONS and UNION-COUNTIES.	Number of Unions.	Number of successful primary Vaccinations of Persons.			Number of successful Re-vaccinations.	Total Number of Births registered during Year.
		Under One Year of Age.	One Year and upwards.	Total.		
1. THE METROPOLIS.						
1.*Middlesex (part)	22	37,532	1,328	38,860	2,835	86,490
2.*Surrey (part)	5	16,942	760	17,702	1,164	36,737
3.*Kent (part)	3	4,132	182	4,314	513	9,854
Totals	30	58,606	2,270	60,876	4,512	133,081
2. SOUTH EASTERN.						
2.*Surrey (part)	11	7,934	634	8,568	878	14,705
3.*Kent (part)	26	13,877	578	14,455	739	22,711
4. Sussex	23	8,881	417	9,298	683	15,206
5. Southampton	26	10,652	295	10,947	107	17,933
6. Berks	12	4,887	161	5,048	1,522	7,784
Totals	98	46,231	2,085	48,316	3,929	78,339
3. SOUTH MIDLAND.						
1.*Middlesex (part)	6	6,952	162	7,114	239	13,553
7. Hertford	12	4,200	56	4,256	134	6,157
8. Buckingham	7	3,415	76	3,491	32	4,972
9. Oxford	9	3,658	196	3,854	14	5,604
10. Northampton	12	5,323	253	5,576	267	9,341
11. Huntingdon	3	1,044	16	1,060	50	1,441
12. Bedford	6	2,859	50	2,909	235	4,910
13. Cambridge	9	3,893	129	4,022	200	5,492
Totals	64	31,344	938	32,282	1,171	51,475
4. EASTERN.						
14. Essex	16	11,677	357	12,034	536	19,867
15. Suffolk	17	8,158	210	8,368	359	11,296
16. Norfolk	22	7,682	1,025	8,707	92	13,589
Totals	55	27,517	1,592	29,109	987	44,752
5. SOUTH WESTERN.						
17. Wilts	17	5,513	86	5,599	64	7,573
18. Dorset	12	3,779	133	3,912	58	5,366
19. Devon	20	12,215	425	12,640	38	18,103
20. Cornwall	13	6,166	210	6,376	—	9,646
21. Somerset	17	10,164	443	10,607	83	14,983
Totals	79	37,837	1,297	39,134	243	55,671

VACCINATION.—Summary of Returns of the Number of Persons Vaccinated and of the Number Re-vaccinated, &c.—*continued.*

DIVISIONS and UNION-COUNTIES.	Number of Unions.	Number of successful primary Vaccinations of Persons.			Number of successful Re-vaccinations.	Total Number of Births registered during Year.
		Under One Year of Age.	One Year and upwards.	Total.		
6. WEST MIDLAND.						
22. Gloucester	17	8,993	287	9,280	536	16,422
23. Hereford	8	2,170	167	2,337	66	3,291
24. Salop	15	5,350	165	5,515	29	7,806
25. Stafford	17	21,520	405	21,925	1,709	38,150
26. Worcester	11	7,459	362	7,821	36	12,367
27. Warwick	14	14,383	570	14,953	713	25,711
Totals	82	59,875	1,956	61,831	3,089	103,747
7. NORTH MIDLAND.						
28. Leicester	11	6,287	274	6,561	43	11,591
29. Rutland	2	338	11	349	125	689
30. Lincoln	14	8,706	551	9,257	239	14,754
31. Nottingham	8	10,124	930	11,054	1,619	16,614
32. Derby	9	8,136	425	8,561	208	13,745
Totals	44	33,591	2,191	35,782	2,236	57,393
8. NORTH WESTERN.						
33. Chester	12	12,364	365	12,729	139	21,116
34. Lancaster	30	62,028	2,220	64,248	3,751	128,229
Totals	42	74,392	2,585	76,977	3,890	149,345
9. YORK.						
35. West Riding	35	38,593	1,998	40,591	652	75,939
36. East Riding	10	6,320	231	6,551	123	12,443
37. North Riding	17	7,050	187	7,237	6	11,991
Totals	62	51,963	2,416	54,379	781	100,373
10. NORTHERN.						
38. Durham	15	20,140	604	20,744	43	35,111
39. Northumberland	12	8,837	296	9,133	592	15,195
40. Cumberland	9	5,265	200	5,465	14	8,709
41. Westmorland	3	1,017	28	1,045	3	1,865
Totals	39	35,259	1,128	36,387	652	60,880
11. WELSH.						
42. Monmouth	6	6,689	315	7,004	60	8,301
43. South Wales	27	22,840	918	23,758	211	30,871
44. North Wales	19	9,230	1,275	10,505	24	13,798
Totals	52	38,759	2,508	41,267	295	52,970
Totals of Unions, England	647	495,374	20,966	516,340	21,785	888,026

No. 85.

VACCINATION.—NUMBER of PERSONS VACCINATED in ENGLAND at the expense of the Poor Rates from 1852 to 1872.

YEARS ended 29th September	Number of registered Births.	Number of Persons *successfully* vaccinated.	Rate per Cent. of the Number *successfully* vaccinated to the Number of Births.
1852	601,839	397,128	66·0
1853	601,223	366,593	61·0
1854	623,699	677,886	108·7
1855	623,181	448,519	72·0
1856	640,840	422,281	65·9
1857	649,963	411,268	63·3
1858	654,914	455,004	69·5
1859	669,834	445,020	66·4
1860	689,060	485,927	70·5
1861	685,646	425,739	62·1
1862	702,181	437,693	62·3
1863	720,660	646,464	89·7
1864	739,236	529,479	71·6
1865	742,680	578,583	77·9
1866	743,859	454,885	61·0
1867	766,635	490,598	64·0
1868	771,905	513,042	66·5
1869	779,039	524,143	67·3
1870	785,775	472,881	60·0
1871	792,663	693,104	87·4
1872	810,291	669,320	82·6

NOTE.—Up to the year 1872, inclusive, there was no separation in the public returns of primary vaccinations and re-vaccinations. The number of persons successfully vaccinated, therefore, as given in the above Table, includes the successful re-vaccinations performed at the expense of the Poor Rates.

No. 86.

VACCINATION. — NUMBER of SUCCESSFUL PRIMARY VACCINATIONS performed in ENGLAND at the expense of the Poor Rates from 1873 to 1882.

YEARS ended 29th September.	Number of registered Births.	Number of *successful* primary Public Vaccinations.		Rate per Cent. of *successful* primary Public Vaccinations to Births.	
		At All Ages.	Under One Year of Age.	At All Ages.	Under One Year of Age.
1873	832,255	501,189	469,538	60·2	56·4
1874	845,286	493,285	470,256	58·4	55·6
1875	853,049	498,952	475,539	58·5	55·7
1876	881,518	506,587	486,031	57·5	55·1
1877	881,897	529,376	498,577	60·0	56·5
1878	892,823	513,575	494,028	57·5	55·3
1879	884,995	519,715	500,646	58·7	56·6
1880	889,893	513,283	494,942	57·7	55·6
1881	874,474	533,005	501,125	61·0	57·3
1882	880,026	516,340	495,374	58·1	55·8

No. 87.

DIGEST of the VACCINATION OFFICERS' RETURNS, with regard to CHILDREN whose BIRTHS were registered in the Year 1880.

The following is the ninth annual return under the Vaccination Act, 1871. Of 881,652 births returned to the Board by the several Vaccination Officers in England and Wales as registered during the year 1880, the number which at the time the return was made had been recorded as successfully vaccinated was 750,203 (being 85·1 per cent. of the whole), and the number returned as having died before they could be vaccinated was 87,361 (or 9·9 per cent. of the whole). Of the remaining 44,088 children, 859 (or 0·097 per cent. of the whole) had been recorded as insusceptible of vaccination; 46 (or 0·005 per cent.) as having contracted small-pox before they could be vaccinated; 5,930 (or 0·67 per cent.) as having their vaccination postponed by medical certificate, leaving 37,253 (or 4·2 per cent.) as "removed," "not to be traced," or otherwise unaccounted for. If from the 881,652 births returned by these Officers, deduction of the deaths without vaccination be first made, it appears that of the surviving 794,291 children, there were registered at the time of the return 94·4 per cent. as successfully vaccinated; 0·11 per cent. as either insusceptible of vaccination, or as having had small-pox; and 0·75 per cent. as under medical certificate of postponement; leaving 4·69 per cent. as at that time still unaccounted for as regards vaccination.

Of the 37,253 cases which this last per-centage represents, the majority were children who could not be found by the Vaccination Officers, usually because of the removal of the parents from the place of birth. The remaining cases in the last column (with the exception of a certain number in which vaccination had really been performed successfully, but which could not be registered as vaccinated on account of the legal certificate of vaccination not having been received by the Vaccination Officer) were cases which, at the time of the return, were still unvaccinated in the union or district.

The results continue to be less complete in the metropolis than in the rest of the kingdom, and the proportion of cases unaccounted for in the metropolitan returns for 1880 is 7 per cent.

The per-centage in the rest of the kingdom, which was 4·5 in 1879, was 4·5 in 1880. Of the registered births of the nine years 1872-80, the proportion not finally accounted for in regard to vaccination in each year respectively has been as follows:

	Metropolis.	Rest of England.
1872	8·8	4·5
1873	8·7	4·2
1874	8·8	4·1
1875	9·3	3·8
1876	6·5	4·0
1877	7·1	4·1
1878	7·1	4·3
1879	7·8	4·5
1880	7·0	4·5

In 1880, the proportion of cases unaccounted for, after deduction of the postponed cases, in the metropolis and in the rest of the kingdom, was 6·6 and 3·8 per cent. of births respectively.

RETURNS, 1880.

—	RETURNS, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
ENGLAND & WALES -	881,652	750,203	859	46	87,361	5,930	37,253	4·9
Ditto excluding Metropolitan Unions.	748,346	638,553	596	11	75,322	5,351	28,513	4·5
METROPOLITAN UNIONS	133,306	111,650	263	35	12,039	579	8,740	7·0
COUNTIES.								
Bedford - - -	5,009	4,222	5	..	618	34	130	3·3
Berks - - -	7,776	6,853	6	..	682	75	160	3·0
Bucks - - -	4,872	4,253	3	..	499	35	82	2·4
Cambridge - - -	5,844	5,074	5	..	612	26	127	2·6
Cheshire - - -	20,304	17,646	22	4	1,907	108	617	3·6
Cornwall - - -	9,469	8,040	3	..	1,165	68	193	2·8
Cumberland - -	8,508	7,479	5	..	756	74	194	3·1
Derby - - -	13,969	11,817	14	..	1,411	68	659	5·2
Devon - - -	18,224	15,983	13	..	1,620	151	457	3·3
Dorset - - -	5,509	4,906	3	..	434	52	114	3·0
Durham - - -	33,200	27,586	10	1	3,728	299	1,576	5·6
Essex - - -	18,534	16,076	23	2	1,612	109	712	4·4
Gloucester - - -	16,478	14,334	15	..	1,457	99	573	4·1
Hereford - - -	3,420	2,924	4	..	314	36	142	5·2
Herts - - -	7,172	6,434	3	..	598	20	117	1·9
Huntingdon - -	1,558	1,380	..	..	139	18	21	2·5
Kent (extra-metropolitan)	22,586	20,012	25	..	1,869	178	502	3·0
Lancashire - - -	127,396	107,991	83	..	13,535	850	5,437	4·9
Leicester - - -	11,910	8,909	6	..	1,002	36	1,357	11·7
Lincolnshire - -	14,994	12,448	7	..	1,694	171	674	5·6
Middlesex (ex.-metropol.)	11,321	9,753	24	..	976	60	508	5·0
Monmouthshire - -	7,901	7,026	4	..	594	54	223	3·5
Norfolk - - -	13,924	11,888	7	..	1,547	72	410	3·5
Northamptonshire -	9,380	7,854	13	..	1,063	45	405	4·8
Northumberland - -	15,207	13,065	23	..	1,540	150	429	3·6
Nottinghamshire - -	15,658	12,844	23	..	1,898	91	802	5·7
Oxfordshire - -	5,725	4,886	6	..	561	54	218	4·8
Rutland - - -	692	614	..	..	62	4	12	2·3
Salop - - -	7,752	6,820	4	..	681	72	175	3·2
Somerset - - -	15,030	13,218	4	..	1,341	138	329	3·1
Southampton - -	17,875	15,698	22	..	1,526	124	505	3·5
Staffordshire - -	32,422	27,857	22	..	3,413	112	1,018	3·5
Suffolk - - -	11,329	9,945	2	1	1,036	98	247	3·0
Surrey (extra-metropol.) -	13,904	12,083	10	1	1,178	132	500	4·5
Sussex - - - -	14,940	13,059	23	2	1,233	151	472	4·2
Warwickshire - -	25,455	21,900	30	..	2,575	102	848	3·7
Westmoreland - -	1,994	1,840	2	..	120	19	13	1·6
Wilts - - -	7,610	6,838	3	..	595	56	118	2·3
Worcestershire - -	18,699	16,117	8	..	1,872	146	556	3·8
Yorkshire, East Riding -	12,408	10,285	11	..	1,449	84	579	5·3
Yorkshire, North Riding	11,499	9,779	8	..	1,277	118	317	3·8
Yorkshire, West Riding -	76,428	62,520	80	..	8,480	561	4,787	7·0
WALES.								
Anglesey - - -	1,019	879	..	..	94	10	36	4·5
Brecknock - - -	1,625	1,403	..	..	171	6	45	3·1
Cardigan - - -	2,090	1,845	..	..	178	26	41	3·2
Carmarthen - -	4,234	3,796	..	..	379	15	44	1·4
Carnarvon - - -	3,645	3,221	4	..	316	41	63	2·9
Denbigh - - -	2,705	2,394	..	..	252	17	42	2·2
Flint - - -	2,733	2,478	..	..	233	19	53	2·6
Glamorgan - - -	18,345	15,846	7	..	1,690	121	681	4·4
Merioneth - - -	2,155	1,831	1	..	239	39	45	3·9
Montgomery - -	2,202	1,858	..	..	206	45	93	6·3
Pembroke - - -	2,604	2,267	..	..	239	54	44	3·8
Radnor - - -	554	479	..	..	56	8	11	3·4

METROPOLITAN UNIONS.	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
Bethnal Green	5,209	4,352	6	5	517	10	319	6·3
Camberwell	6,681	5,614	9	..	585	17	456	7·1
Chelsea	3,234	2,768	9	..	271	..	186	5·8
Fulham	4,231	3,592	12	1	373	11	242	6·0
George, St., Hanover Sq.	3,930	3,365	16	..	360	1	188	4·8
George, St., in the East	1,871	1,566	3	..	171	2	129	7·0
Giles and George, S.S.	1,513	1,226	..	..	132	6	149	10·2
Greenwich	4,710	4,004	6	5	403	17	275	6·2
Hackney	6,421	5,374	22	7	627	24	367	6·1
Hampstead	1,108	976	3	..	94	7	28	3·2
Holborn	5,714	4,769	3	2	551	19	370	6·8
Islington	9,931	8,123	26	..	885	118	779	9·0
Kensington	4,652	4,064	17	..	408	4	159	3·5
Lambeth	9,296	7,292	28	3	845	66	1,062	12·1
Lewisham	2,105	1,862	9	..	169	10	55	3·1
London, City	1,087	960	2	..	92	..	33	3·0
Marylebone	5,133	4,183	9	1	557	33	350	7·5
Mile End Old Town	4,185	3,480	14	2	388	16	285	7·2
Olave, St.	5,422	4,772	6	1	373	26	244	5·0
Paddington	2,873	2,380	7	..	267	49	170	7·6
Pancras, St.	8,113	6,839	16	2	668	12	576	7·2
Poplar	6,251	5,440	7	1	562	6	235	3·9
Saviour, St.	7,531	6,194	4	..	727	62	544	8·0
Shoreditch	5,173	4,034	..	5	501	..	633	12·2
Stepney	2,210	1,769	3	..	224	..	214	9·7
Strand	902	736	..	..	83	10	73	9·2
Wandsworth and Clapham	7,092	6,085	20	..	629	43	315	5·0
Westminster	1,274	1,063	..	..	135	8	68	6·0
Whitechapel	2,673	2,400	..	..	212	2	59	2·3
Woolwich	2,781	2,368	6	..	230	..	177	6·4
	133,306	111,650	263	35	12,039	579	8,740	7·0

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead, Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
BEDFORDSHIRE.								
Ampthill	529	459	..	..	65	..	5	0·9
Bedford	1,285	1,117	1	..	119	4	44	3·7
Biggleswade	932	808	..	..	115	1	8	1·0
Leighton Buzzard	617	519	1	..	79	5	13	2·9
Luton	1,341	1,057	2	..	205	23	54	5·7
Woburn	305	262	1	..	35	1	6	2·3
BERKS.								
Abingdon	694	610	..	..	65	4	15	2·7
Bradfield	582	523	1	..	53	..	5	0·9
Cookham	529	479	..	..	34	4	12	3·0
Easthampstead	347	319	..	..	25	..	3	0·9
Faringdon	417	384	..	..	25	3	5	1·9
Hungerford	520	479	..	..	36	2	3	1·0
Newbury	606	507	2	..	56	29	12	6·8
Reading	1,581	1,360	..	..	172	21	28	3·1
Wallingford	392	352	..	..	30	4	6	2·6
Wantage	528	460	2	..	55	..	11	2·1
Windsor	926	802	1	..	90	1	32	3·6
Wokingham	654	578	..	..	41	7	28	5·4
BUCKS.								
Amersham	578	510	..	..	59	6	3	1·6
Aylesbury	758	641	..	..	76	15	26	5·4
Buckingham	348	291	1	..	46	2	8	2·9
Eton	729	653	..	..	70	2	4	0·8
Newport Pagnell	812	713	1	..	79	1	18	2·3
Winslow	228	204	..	..	21	2	1	1·3
Wycombe	1,419	1,241	1	..	148	7	22	2·0
CAMBRIDGE.								
Cambridge	1,040	903	2	..	111	4	20	2·3
Caxton and Arrington	328	288	..	..	30	..	10	3·0
Chesterton	904	806	..	..	69	1	28	3·2
Ely	600	491	..	..	75	12	22	5·7
Linton	397	353	..	..	32	..	12	3·0
Newmarket	874	761	..	..	103	1	9	1·1
North Witchford	475	413	1	..	56	1	4	1·1
Whittlesey	194	165	..	..	26	1	2	1·5
Wisbeach	1,032	894	2	..	110	6	20	2·5
CHESHIRE.								
Altrincham	1,789	1,595	1	..	148	8	37	2·5
Birkenhead	3,661	3,289	7	..	296	5	64	1·9
Tarvin	346	311	1	..	24	4	6	2·9
Chester	1,601	1,402	1	..	155	8	35	2·7
Congleton	1,298	1,131	..	..	132	14	21	2·7
Macclesfield	1,875	1,569	3	..	213	20	70	4·8
Nantwich	2,061	1,635	2	..	223	12	189	9·8
Northwich	1,682	1,503	..	..	161	3	15	1·1
Runcorn	1,249	1,148	1	..	92	1	7	0·6
Stockport	3,862	3,258	4	4	415	25	156	4·7
Wirrall	880	805	2	..	48	8	17	2·8

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
CORNWALL.								
Austell, St.	940	816	..	..	110	3	11	1·5
Bodmin	519	459	2	..	50	2	6	1·5
Camelford	228	201	..	..	20	2	5	3·1
Columb, St., Major	489	438	..	..	46	..	5	1·0
Falmouth	694	591	..	..	81	5	17	3·2
German's, St.	490	440	..	..	44	2	4	1·2
Helston	701	554	..	..	106	10	31	5·8
Launceston	465	426	..	..	31	4	4	1·7
Liskeard	815	712	1	..	73	11	18	3·6
Penzance	1,558	1,286	..	..	239	7	26	2·1
Redruth	1,365	1,083	..	..	238	10	34	3·2
Stratton	259	232	..	..	24	2	1	1·2
Truro	946	802	..	..	103	10	31	4·3
CUMBERLAND.								
Alston-with-Garrigill	111	103	..	..	7	..	1	0·9
Bootle	428	388	..	..	33	2	5	1·6
Brampton	303	269	..	..	27	2	5	2·3
Carlisle	1,756	1,556	..	..	159	6	35	2·3
Cockermouth	2,065	1,765	..	..	195	37	68	5·1
Longtown	213	197	..	..	12	3	1	1·9
Penrith	715	662	..	..	44	3	6	1·3
Whitehaven	2,210	1,901	5	..	226	15	63	3·5
Wigton	707	638	..	..	53	6	10	2·3
DERBY.								
Ashbourne	562	496	..	..	39	8	19	4·8
Bakewell	986	838	1	..	102	10	35	4·6
Belper	2,098	1,851	4	..	184	1	58	2·8
Chapel-en-le-Frith	601	502	1	..	63	7	28	5·8
Chesterfield	4,105	3,539	4	..	407	18	137	3·8
Derby	2,858	2,207	2	..	342	10	297	10·7
Glossop	737	631	..	..	72	5	29	4·6
Hayfield	379	336	..	..	31	6	6	3·2
Shardlow	1,643	1,417	2	..	171	3	50	3·2
DEVON.								
Axminster	507	445	1	..	49	..	12	2·4
Barnstaple	1,085	962	..	..	97	13	13	2·4
Bideford	571	505	1	..	51	4	10	2·5
Crediton	521	465	..	..	48	1	7	1·5
East Stonehouse	615	522	..	..	65	10	18	4·6
Exeter	1,166	974	..	..	143	15	34	4·2
Holsworthy	274	250	..	..	16	4	4	2·9
Honiton	688	624	..	..	57	1	6	1·0
Kingsbridge	549	488	..	..	53	2	6	1·5
Newton Abbot	2,103	1,897	3	..	175	5	23	1·3
Okehampton	483	433	..	..	32	11	7	3·7
Plymouth	2,382	1,899	2	..	285	24	172	8·2
Plympton St. Mary	684	604	..	..	49	12	19	4·5
South Molton	463	429	2	..	22	4	6	2·2
Stoke Damerel	1,534	1,355	1	..	122	6	50	3·7
Tavistock	787	720	..	..	64	1	2	0·4
Thomas, St.	1,418	1,266	..	..	110	9	33	3·0
Tiverton	835	727	1	..	71	13	23	4·3
Torrington	425	385	..	..	25	7	8	3·5
Totnes	1,134	1,033	2	..	86	9	4	1·1

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
DORSET.								
Beaminster	334	301	..	..	23	1	4	1·5
Blandford	384	325	..	..	30	3	26	7·6
Bridport	475	427	..	..	40	3	5	1·7
Cerne	180	167	..	..	10	3	..	1·7
Dorchester	525	464	..	..	52	4	5	1·7
Poole	658	586	1	..	55	6	10	2·4
Shaftesbury	351	306	..	..	27	10	8	5·1
Sherborne	360	334	..	..	20	1	5	1·7
Sturminster	296	269	..	..	19	..	8	2·7
Wareham and Purbeck	518	463	..	..	38	4	13	3·3
Weymouth	885	780	2	..	77	11	15	2·9
Wimborne and Cranborne	543	484	..	..	38	6	15	3·9
DURHAM.								
Auckland	3,214	2,697	..	..	384	22	111	4·1
Chester-le-Street	1,758	1,524	..	..	180	8	46	3·1
Darlington	1,660	1,372	2	..	197	6	83	5·4
Durham	2,405	2,012	1	..	272	24	96	5·0
Easington	1,653	1,394	..	..	193	..	66	4·0
Gateshead	4,152	3,275	3	1	507	40	326	8·8
Hartlepool	1,935	1,690	..	..	204	19	22	2·1
Houghton-le-Spring	1,361	1,147	..	..	169	14	31	3·3
Lanchester	2,187	1,932	2	..	212	5	36	1·9
Sedgefield	565	479	..	..	63	2	21	4·1
South Shields	4,240	3,345	1	..	476	60	358	9·9
Stockton	1,885	1,505	1	..	212	20	147	8·9
Sunderland	5,064	4,251	..	..	543	71	199	5·3
Teesdale	600	505	..	..	69	3	23	4·3
Weardale	521	458	..	..	47	5	11	3·1
ESSEX.								
Billericay	536	475	..	2	41	..	18	3·4
Braintree	859	735	..	..	91	11	22	3·8
Chelmsford	1,009	911	..	..	81	7	10	1·7
Colchester	913	769	3	..	100	11	30	4·5
Dunmow	497	454	..	..	37	2	4	1·2
Epping	650	560	..	..	63	1	26	4·2
Halstead	458	400	..	..	48	1	9	2·2
Lexden and Winstree	716	662	..	..	46	4	4	1·1
Maldon	778	704	1	..	50	4	19	3·0
Ongar	305	275	..	..	16	5	9	4·6
Orsett	540	480	..	..	44	5	11	3·0
Rochford	823	723	1	..	76	8	15	2·8
Romford	1,332	1,148	2	..	117	13	52	4·9
Saffron Walden	517	469	..	..	39	2	7	1·7
Tendring	1,079	949	4	..	101	3	22	2·3
West Ham	7,522	6,362	12	..	662	32	454	6·5
GLOUCESTER.								
Barton Regis	5,708	5,048	9	..	473	11	167	3·1
Bristol	1,873	1,566	..	..	139	6	112	6·3
Cheltenham	1,362	1,039	..	..	159	42	122	12·0
Chipping Sodbury	520	456	..	..	49	6	9	2·9
Cirencester	602	520	2	..	63	1	16	2·8
Dursley	351	309	..	..	28	1	13	4·0
Gloucester	1,515	1,346	2	..	135	5	27	2·1
Newent	313	287	..	..	21	..	5	1·6
Northleach	268	236	..	..	20	2	10	4·5

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
GLOUCESTER—*cont.*								
Stow-on-the-Wold	275	252	..	..	17	..	6	2·2
Stroud	1,257	1,116	..	..	127	4	10	1·1
Tetbury	198	177	..	..	11	5	5	5·0
Tewkesbury	395	352	2	..	26	3	12	3·8
Thornbury	514	471	..	..	28	9	6	2·9
Westbury-on-Severn	824	712	..	..	65	2	45	5·7
Wheatenhurst	221	205	..	..	15	..	1	0·5
Winchcomb	282	242	..	..	31	2	7	3·2
HEREFORD.								
Bromyard	298	232	..	..	38	8	20	9·4
Dore	206	179	..	..	19	3	5	3·9
Hereford	1,029	894	1	..	90	7	37	4·3
Kington	375	327	..	..	34	1	13	3·7
Ledbury	335	292	..	..	28	3	12	4·5
Leominster	410	337	3	..	41	6	33	9·5
Ross	535	466	..	..	45	7	17	4·5
Weobley	232	207	..	..	19	1	5	2·6
HERTS.								
Albans, St.	774	677	1	..	77	3	16	2·5
Barnet	918	814	1	..	88	3	12	1·6
Berkhampstead	500	435	..	..	50	..	15	3·0
Bishop's Stortford	673	617	..	..	46	2	8	1·5
Buntingford	167	153	..	..	9	..	5	3·0
Hatfield	199	176	..	..	14	2	7	4·5
Hemel Hempstead	450	394	..	..	43	..	8	1·8
Hertford	470	429	..	..	33	2	6	1·7
Hitchin	906	838	..	..	63	..	5	0·6
Royston	575	518	..	..	44	6	7	2·4
Ware	548	494	..	..	40	..	14	2·6
Watford	907	811	1	..	81	2	12	1·5
Welwyn	85	78	..	..	5	..	2	2·4
HUNTINGDON.								
Huntingdon	580	505	..	..	63	3	9	2·1
Ives, St.	505	451	..	..	42	6	6	2·4
Neots, St.	473	424	..	..	34	9	6	3·2
KENT (Extra-Metropolitan).								
Ashford, East	418	381	..	..	32	1	4	1·2
Ashford, West	570	510	1	..	43	2	14	2·8
Blean	590	537	..	..	42	1	10	1·9
Bridge	374	339	1	..	23	..	11	2·9
Bromley	1,470	1,292	1	..	149	15	13	1·9
Canterbury	517	439	5	..	52	4	17	4·1
Cranbrook	423	381	1	..	37	3	1	1·0
Dartford	1,767	1,560	3	..	150	17	37	3·1
Dover	1,190	935	1	..	117	27	110	11·5
Eastry	772	684	..	..	52	5	31	4·7
Elham	1,080	950	1	..	97	9	23	3·0
Faversham	902	820	2	..	73	..	7	0·8
Gravesend and Milton	686	603	1	..	62	2	18	2·9
Hollingbourn	418	369	..	..	34	..	15	3·6
Hoo	122	103	..	..	13	6	..	4·9
Maidstone	1,462	1,253	..	..	135	28	46	5·1

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
KENT (Extra-Metropolitan)—*cont.*								
Malling	927	843	..	..	68	..	16	1·7
Medway	1,994	1,818	2	..	162	6	6	0·6
Milton	949	842	..	..	87	9	11	2·1
North Aylesford	991	879	..	..	109	1	2	0·3
Romney Marsh	215	205	..	..	8	1	1	0·9
Sevenoaks	782	710	3	..	51	2	16	2·3
Sheppey	635	557	..	..	61	6	11	2·7
Tenterden	309	289	..	..	12	..	8	2·6
Thanet, I. of	1,489	1,338	2	..	117	8	24	2·1
Tonbridge	1,534	1,375	1	..	83	25	50	4·9
LANCASHIRE.								
Ashton-under-Lyne	5,350	4,556	4	..	563	35	192	4·2
Barrow-in-Furness	1,759	1,630	1	..	177	5	46	2·9
Barton-upon-Irwell	2,446	2,146	4	..	205	10	81	3·6
Blackburn	6,334	5,546	2	..	655	32	99	2·1
Bolton	7,000	6,392	1	..	552	1	54	0·8
Burnley	4,320	3,662	..	..	509	34	115	3·4
Bury	4,432	3,925	1	..	394	10	102	2·5
Chorley	1,738	1,468	..	..	177	..	93	5·4
Chorlton	9,082	7,352	5	..	1,049	50	626	7·4
Clitheroe	714	625	1	..	62	6	20	3·6
Fylde, The	1,395	1,184	..	..	158	2	51	3·8
Garstang	377	330	..	..	37	..	10	2·7
Haslingden	3,254	2,946	1	..	275	9	23	1·0
Lancaster	1,331	1,140	..	..	137	12	42	4·1
Leigh	2,289	1,983	3	..	242	10	51	2·7
Liverpool	7,300	6,083	4	..	857	7	349	4·9
Lunesdale	212	196	..	..	12	2	2	1·9
Manchester	5,637	4,526	1	..	621	29	460	8·7
Oldham	5,832	4,497	7	..	712	73	543	10·6
Ormskirk	2,759	2,374	..	..	286	11	88	3·6
Prescot	4,820	4,029	..	..	537	40	214	5·3
Preston	4,597	3,707	1	..	584	84	221	6·6
Prestwich	4,651	3,749	2	..	486	11	403	8·9
Rochdale	3,679	3,196	1	..	369	31	82	3·1
Salford	7,388	5,993	6	..	915	71	403	6·4
Todmorden	1,033	903	1	..	103	..	26	2·5
Toxteth Park	4,489	3,750	15	..	441	28	255	6·3
Ulverstone	1,499	1,343	2	..	117	16	21	2·5
Warrington	2,826	2,311	..	..	317	56	142	7·0
West Derby	13,316	11,248	17	..	1,366	147	538	5·1
Wigan	6,037	5,301	3	..	620	28	85	1·9
LEICESTER.								
Ashby-de-la-Zouch	1,236	1,091	..	..	102	..	43	3·5
Barrow-on-Soar	1,093	806	..	..	155	7	125	12·4
Billesdon	271	224	..	..	19	..	28	10·3
Blaby	823	658	..	..	102	5	58	7·7
Hinckley	651	554	..	..	93	..	4	0·6
Leicester	4,860	3,010	5	..	816	14	1,015	21·2
Loughborough	985	834	..	..	120	3	28	3·1
Lutterworth	354	312	..	..	28	..	14	4·0
Market Bosworth	524	461	..	..	50	3	10	2·5
Market Harborough	469	406	1	..	51	3	8	2·3
Melton Mowbray	644	553	..	..	66	1	24	3·9

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
LINCOLNSHIRE.								
Boston	1,180	960	..	..	135	2	83	7·2
Bourn	561	485	..	..	56	6	14	3·6
Caistor	2,403	2,017	..	..	260	22	104	5·2
Gainsborough	1,027	798	1	..	129	34	65	9·6
Glanford Brigg	1,373	1,180	2	..	157	2	32	2·5
Grantham	1,108	941	3	..	113	10	41	4·6
Holbeach	670	574	..	..	63	8	25	4·9
Horncastle	658	572	..	..	70	2	14	2·4
Lincoln	2,111	1,592	1	..	303	55	160	10·2
Louth	1,034	881	..	..	110	8	35	4·2
Sleaford	748	659	..	..	79	..	10	1·3
Spalding	726	626	..	..	71	10	19	4·0
Spilsby	843	688	..	..	87	11	57	8·1
Stamford	552	475	..	..	61	1	15	2·9
MIDDLESEX (Extra-Metropolitan).								
Brentford	3,415	2,919	6	..	296	13	181	5·7
Edmonton	4,650	4,009	13	..	391	23	214	5·1
Hendon	1,744	1,483	5	..	166	14	76	5·2
Staines	684	593	..	..	53	6	33	5·7
Uxbridge	828	749	..	..	71	4	4	1·0
MONMOUTHSHIRE.								
Abergavenny	719	648	..	..	58	3	10	1·8
Bedwellty	1,975	1,758	..	..	152	14	51	3·3
Chepstow	531	474	..	..	37	4	16	3·8
Monmouth	944	834	1	..	77	9	23	3·4
Newport	2,538	2,296	3	..	183	16	40	2·2
Pontypool	1,194	1,016	..	..	87	8	83	7·6
NORFOLK.								
Aylsham	559	364	..	..	50	8	137	25·9
Blofield	340	309	..	..	27	1	3	1·2
Depwade	718	615	2	..	68	4	29	4·6
Docking	533	468	..	..	58	2	5	1·3
Downham	616	537	..	..	71	..	8	1·3
Erpingham	597	531	..	..	58	3	5	1·3
Faith, St.	385	338	2	..	39	1	5	1·6
Flegg, East and West	370	299	..	..	58	2	11	3·5
Forehoe	332	291	..	..	29	1	11	3·6
Freebridge Lynn	440	372	..	..	47	6	15	4·8
Guiltcross	326	272	..	..	39	2	13	4·6
Henstead	317	284	2	..	25	..	6	1·9
King's Lynn	580	495	..	..	68	3	14	2·9
Loddon and Clavering	420	377	..	..	36	2	5	1·7
Mitford and Launditch	841	760	..	..	72	4	5	1·1
Norwich	2,976	2,496	1	..	413	3	63	2·2
Swaffham	377	317	..	..	49	4	7	2·9
Thetford	554	475	..	..	54	2	23	4·5
Smallburgh	456	399	..	..	49	1	7	1·8
Walsingham	614	528	..	..	65	4	17	3·4
Wayland	343	300	..	..	32	6	5	3·2
Yarmouth, Great	1,230	1,061	..	..	140	13	16	2·4

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
NORTHAMPTONSHIRE.								
Brackley	331	255	2	..	44	9	21	9·1
Brixworth	391	348	..	..	33	..	10	2·6
Daventry	532	463	2	..	58	..	9	1·7
Hardingstone	357	307	1	..	39	..	10	2·8
Kettering	906	764	3	..	103	6	30	4·0
Northampton	2,347	1,774	3	..	334	8	228	10·1
Oundle	401	355	..	..	40	..	6	1·5
Peterborough	1,490	1,326	..	..	135	..	29	1·9
Potterspury	411	361	..	..	41	2	7	2·2
Thrapston	538	467	..	..	60	3	8	2·0
Towcester	408	356	1	..	42	3	6	2·2
Wellingborough	1,268	1,078	1	..	134	14	41	4·3
NORTHUMBERLAND.								
Alnwick	612	536	..	..	41	24	11	5·7
Belford	155	137	4	..	14	..	..	0·0
Bellingham	144	129	..	..	10	..	5	3·5
Berwick-on-Tweed	651	572	1	..	63	6	9	2·3
Castle Ward	636	524	1	..	66	3	42	7·1
Glendale	258	225	1	..	27	..	5	1·9
Haltwhistle	258	232	..	..	22	4	..	1·6
Hexham	1,077	925	..	..	93	5	54	5·5
Morpeth	1,423	1,233	2	..	160	2	26	2·0
Newcastle-on-Tyne	5,540	4,807	8	..	557	37	131	3·0
Rothbury	168	150	..	..	12	..	6	3·6
Tynemouth	4,285	3,595	6	..	475	69	140	4·9
NOTTINGHAMSHIRE.								
Basford	4,758	3,979	8	..	576	22	173	4·1
Bingham	446	377	1	..	63	1	4	1·1
East Retford	721	655	..	..	53	1	12	1·8
Mansfield	1,783	1,447	1	..	238	14	83	5·4
Newark	1,013	882	2	..	96	4	29	3·3
Nottingham	5,339	4,091	11	..	721	43	473	9·7
Southwell	565	495	..	..	52	1	17	3·2
Worksop	1,033	918	..	..	99	5	11	1·5
OXFORDSHIRE.								
Banbury	912	676	1	..	92	18	125	15·7
Bicester	404	350	..	..	43	5	6	2·7
Chipping Norton	604	519	..	..	62	9	14	3·8
Headington	935	820	..	..	96	5	14	2·0
Henley	615	547	..	..	52	1	15	2·6
Oxford	727	623	4	..	72	6	22	3·9
Thame	443	389	..	..	45	1	10	2·5
Witney	680	615	..	..	54	6	5	1·6
Woodstock	405	347	1	..	47	3	7	2·5
RUTLAND.								
Oakham	321	284	..	..	31	1	5	1·9
Uppingham	371	330	..	..	31	3	7	2·7

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centages of Children not finally accounted for, including cases postponed.
SALOP.								
Atcham	1,307	1,154	1	..	109	23	20	3·3
Bridgnorth	427	382	..	..	26	2	17	4·4
Church Stretton	137	125	..	..	8	..	4	2·9
Cleobury Mortimer	221	203	..	..	15	1	2	1·4
Clun	292	238	..	..	34	9	11	6·8
Drayton	395	360	..	..	30	5	..	1·3
Ellesmere	383	340	..	..	35	..	8	2·1
Ludlow	543	456	1	..	55	5	26	5·7
Madeley	844	743	1	..	74	4	22	3·1
Newport	446	395	..	..	39	2	10	2·7
Oswestry	844	751	..	..	77	2	14	1·9
Shifnal	373	316	..	..	37	6	14	5·4
Wellington	926	801	..	..	100	7	18	2·7
Wem	258	240	1	..	13	3	1	1·6
Whitchurch	356	316	..	..	29	3	8	3·1
SOMERSET.								
Axbridge	1,164	1,025	1	..	95	14	29	3·7
Bath	1,837	1,501	..	..	218	37	81	6·4
Bedminster	2,499	2,191	1	..	254	17	36	2·1
Bridgwater	1,032	906	1	..	88	3	34	3·6
Chard	846	741	..	..	84	6	15	2·5
Clutton	817	738	..	..	70	..	9	1·1
Dulverton	144	138	..	..	5	..	1	0·7
Frome	692	636	..	..	43	..	13	1·9
Keynsham	906	805	..	..	75	4	22	2·9
Langport	447	400	..	..	32	4	11	3·4
Shepton Mallet	474	429	..	..	35	4	6	2·1
Taunton	1,035	923	1	..	90	11	10	2·0
Wellington	576	527	..	..	46	1	2	0·5
Wells	632	548	..	..	51	14	19	5·2
Williton	523	480	..	..	33	3	7	1·9
Wincanton	553	488	..	..	53	..	12	2·2
Yeovil	853	742	..	..	69	20	22	4·9
SOUTHAMPTON.								
Alresford	185	165	..	..	14	2	4	3·2
Alton	495	443	..	..	36	2	14	3·2
Alverstoke	700	637	1	..	60	..	2	0·3
Andover	427	373	..	..	39	5	10	3·5
Basingstoke	625	543	..	..	47	17	18	5·6
Catherington	73	59	..	..	4	1	9	13·7
Christchurch	846	727	2	..	75	13	29	5·0
Droxford	322	296	..	..	19	2	5	2·2
Fareham	439	397	..	..	27	..	15	3·4
Fordingbridge	155	137	..	..	17	..	1	0·6
Hartley Wintney	549	488	..	..	34	2	25	4·9
Havant	281	257	..	..	16	2	6	2·8
Hursley	82	72	..	..	8	1	1	2·4
Kingsclere	239	216	..	..	20	2	1	1·3
Lymington	382	329	..	..	33	..	20	5·2
New Forest	345	304	1	..	28	1	11	3·5
Petersfield	315	293	..	..	18	1	3	1·3
Portsea Island	4,420	3,930	11	..	379	19	81	2·3
Ringwood	136	127	..	..	7	..	2	1·5
Romsey	352	307	..	..	38	2	12	3·9
Southampton	1,748	1,480	3	..	196	18	101	6·8
South Stoneham	1,320	1,128	1	..	125	20	46	5·0
Stockbridge	203	176	..	..	21	2	4	3·0
Whitchurch	176	154	..	..	10	5	7	6·8
Wight, Isle of	2,150	1,896	2	..	176	5	71	3·5
Winchester, New	903	814	1	..	79	2	7	1·0

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
STAFFORDSHIRE.								
Wolstanton and Burslem	3,007	2,586	..	..	392	6	23	1·0
Burton-on-Trent	2,916	2,445	1	..	259	21	190	7·2
Cannock	1,342	1,149	..	..	143	4	46	3·7
Cheadle	740	673	1	..	56	4	6	1·4
Leek	1,100	948	1	..	109	13	29	3·8
Lichfield	1,230	1,074	5	..	114	6	31	3·0
Newcastle-under-Lyme	1,273	1,083	..	..	116	2	72	5·8
Seisdon	485	450	1	..	43	..	11	2·3
Stafford	938	816	4	..	86	8	24	3·4
Stoke-upon-Trent	4,170	3,448	..	..	537	16	169	4·4
Stone	935	808	1	..	100	2	24	2·8
Tamworth	726	618	..	..	75	5	28	4·6
Uttoxeter	416	390	..	..	19	..	7	1·7
Walsall	3,285	2,809	3	..	359	6	108	3·5
West Bromwich	4,938	4,359	3	..	472	14	90	2·1
Wolverhampton	4,921	4,221	2	..	553	5	160	3·4
SUFFOLK.								
Blything	824	743	..	..	61	4	16	2·4
Bosmere and Claydon	499	429	1	..	42	..	27	5·4
Bury St. Edmunds	500	423	..	..	62	3	12	3·0
Cosford	489	441	..	..	43	..	5	1·0
Hartismere	507	460	..	..	38	1	8	1·8
Hoxne	401	362	..	..	32	1	6	1·7
Ipswich	1,632	1,348	1	1	179	39	64	6·3
Mildenhall	300	264	..	..	24	..	12	4·0
Mutford and Lothingland	1,468	1,295	..	..	147	9	17	1·8
Plomesgate	588	511	..	..	56	6	15	3·6
Risbridge	578	522	..	..	47	2	7	1·6
Samford	378	334	..	..	32	3	9	3·2
Stow	656	581	..	..	63	4	8	1·8
Sudbury	852	749	..	..	64	17	22	4·6
Thingoe	507	446	..	..	49	6	6	2·4
Wangford	435	393	..	..	38	..	4	0·9
Woodbridge	715	644	..	..	59	3	9	1·7
SURREY (Extra Metropolitan).								
Chertsey	849	735	..	..	62	24	28	6·1
Croydon	3,629	2,959	3	..	343	49	275	8·9
Dorking	466	434	..	..	26	..	6	1·3
Epsom	1,115	915	1	..	121	25	53	7·0
Farnham	1,505	1,303	3	..	138	8	53	4·1
Godstone	421	372	..	..	30	1	18	4·5
Guildford	1,216	1,105	..	..	92	6	13	1·6
Hambledon	464	425	..	..	32	2	5	1·5
Kingston	2,329	2,107	2	..	183	13	24	1·6
Reigate	901	816	..	..	71	4	10	1·6
Richmond	1,009	912	1	1	80	..	15	1·5
SUSSEX.								
Battle	453	393	..	..	45	5	10	3·3
Brighton	2,912	2,535	4	1	265	22	85	3·7
Chailey	286	251	..	..	24	5	6	3·8
Chichester	254	206	1	..	29	5	13	7·1
Cuckfield	748	650	..	..	57	0	31	5·5
Eastbourne	829	711	2	..	76	9	31	4·8
East Grinstead	604	518	1	..	48	7	30	6·1
East Preston	745	658	..	..	68	4	15	2·6

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
SUSSEX—*cont.*								
Hailsham	440	392	..	..	30	6	12	4·1
Hastings	1,375	1,110	..	..	144	35	86	8·8
Horsham	676	609	4	..	44	2	17	2·8
Lewes	346	290	1	..	33	9	13	6·4
Midhurst	422	391	..	..	24	3	4	1·7
Newhaven	276	226	1	..	25	1	23	8·7
Petworth	267	248	..	..	12	6	1	2·6
Rye	410	364	3	..	37	..	6	1·5
Steyning	1,524	1,361	2	1	117	5	38	2·8
Thakeham	267	243	..	..	15	9	..	3·4
Ticehurst	521	475	1	..	29	2	14	3·1
Uckfield	706	633	2	..	46	1	24	3·5
Westbourne	234	214	..	..	13	2	5	3·0
West Firle	65	58	..	..	5	1	1	3·1
Westhampnett	580	523	1	..	47	2	7	1·6
WARWICKSHIRE.								
Alcester	619	527	..	..	66	7	19	4·2
Aston	8,372	7,009	11	..	850	44	458	6·0
Atherstone	514	458	1	..	45	..	10	1·9
Birmingham	9,225	8,015	10	..	967	19	214	2·5
Coventry	1,432	1,226	2	..	170	6	28	2·4
Foleshill	652	578	..	..	66	6	2	1·2
Meriden	278	252	..	..	16	5	5	3·6
Nuneaton	498	414	..	..	67	5	12	3·4
Rugby	871	753	..	..	84	..	34	3·9
Solihull	563	497	..	..	46	5	15	3·6
Southam	308	274	..	..	29	2	3	1·6
Stratford-on-Avon	670	594	1	..	50	..	25	3·7
Warwick	1,453	1,303	5	..	119	3	23	1·8
WESTMORELAND.								
East Ward	446	411	..	..	28	5	2	1·6
Kendal	1,315	1,209	2	..	82	13	9	1·7
West Ward	233	220	..	..	10	1	2	1·3
WILTS.								
Alderbury	777	696	..	..	69	3	9	1·5
Amesbury	203	186	..	..	16	..	1	0·5
Bradford	315	291	..	..	21	..	3	1·0
Calne	237	223	..	..	9	4	1	2·1
Chippenham	648	596	1	..	40	4	7	1·7
Cricklade and Wootton Bassett.	358	306	2	..	35	6	9	4·2
Devizes	594	530	..	..	48	5	11	2·7
Highworth and Swindon	1,399	1,211	..	..	137	14	37	3·6
Malmesbury	425	377	..	..	32	9	7	3·8
Marlborough	263	248	..	..	8	..	7	2·7
Melksham	543	490	..	..	46	1	6	1·3
Mere	194	176	..	..	17	1	..	0·5
Pewsey	361	332	..	..	20	2	7	2·5
Tisbury	258	231	..	..	25	1	1	0·8
Warminster	411	375	..	..	23	5	8	3·2
Westbury and Whorwelsdown.	329	296	..	..	30	1	2	0·9
Wilton	295	274	..	..	19	..	2	0·7

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
WORCESTERSHIRE.								
Bromsgrove	1,033	901	1	..	108	8	15	2·2
Droitwich	825	721	..	..	75	5	24	3·5
Dudley	5,779	5,028	3	..	607	35	106	2·4
Evesham	411	367	..	..	24	4	16	4·9
Kidderminster	1,382	1,219	..	..	134	9	20	2·1
King's Norton	3,041	2,511	2	..	309	31	188	7·2
Martley	438	384	..	..	40	3	11	3·2
Pershore	416	368	..	..	44	..	4	1·0
Shipston-on-Stour	511	446	1	..	47	3	14	3·3
Stourbridge	3,055	2,651	..	..	294	19	91	3·6
Tenbury	221	187	..	..	18	8	8	7·2
Upton-on-Severn	561	505	1	..	42	5	8	2·3
Worcester	1,026	829	..	..	130	16	51	6·5
YORKSHIRE, East Riding.								
Beverley	743	628	..	..	77	11	27	5·1
Bridlington	552	468	1	..	65	6	12	3·3
Driffield	600	576	..	..	102	5	16	3·0
Howden	397	348	..	..	39	1	9	2·5
Kingston-upon-Hull	2,830	2,371	5	..	340	15	99	4·0
Patrington	279	243	..	..	23	..	13	4·7
Pocklington	437	405	2	..	63	8	9	3·5
Sculcoates	3,657	3,057	3	..	410	17	170	4·1
Skirlaugh	307	259	..	..	38	..	10	3·3
York	2,457	1,930	..	..	292	21	214	9·6
YORKSHIRE, North Riding.								
Aysgarth	184	161	1	..	18	2	2	2·2
Bedale	247	219	..	..	24	2	2	1·6
Easingwold	282	243	..	..	31	1	7	2·8
Guisborough	1,640	1,396	..	..	197	6	41	2·9
Helmsley Blackmoor	181	163	..	..	16	..	2	1·1
Kirkby Moorside	150	130	..	..	17	2	1	2·0
Leyburn	215	193	..	..	18	1	3	1·9
Malton	754	593	3	..	99	22	37	7·8
Middlesbrough	3,454	2,910	2	..	432	29	81	3·2
Northallerton	379	335	..	..	31	3	10	3·4
Pickering	349	293	1	..	34	3	18	6·0
Reeth	139	123	..	..	13	1	2	2·2
Richmond	416	375	..	..	32	2	7	2·2
Scarborough	1,427	1,168	..	..	166	29	64	6·5
Stokesley	359	311	..	..	36	4	8	3·3
Thirsk	422	361	1	..	45	3	12	3·6
Whitby	901	805	..	..	68	8	20	3·1
YORKSHIRE, West Riding.								
Barnsley	3,342	2,668	..	..	425	53	196	7·5
Bramley	2,021	1,738	..	..	217	20	46	3·3
Bradford	6,416	5,057	4	..	780	13	562	9·0
Bierley, North	4,188	3,478	6	..	457	39	208	5·9
Dewsbury	5,379	3,754	9	..	713	82	821	16·8
Doncaster	1,943	1,669	..	..	224	10	40	2·6
Ecclesall Bierlow	4,068	3,488	7	..	394	17	162	4·4
Goole	712	626	1	..	69	1	15	2·2
Halifax	5,517	4,710	5	..	584	53	165	4·0

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
YORKSHIRE, West Riding—*cont.*								
Hemsworth	350	311	..	..	26	2	11	3·7
Holbeck	894	779	1	..	92	5	17	2·5
Huddersfield	4,843	4,301	2	..	488	8	44	1·1
Hunslet	2,430	1,959	3	..	310	55	103	6·5
Keighley	1,882	465	1	..	222	24	1,170	63·4
Knaresborough	678	549	3	..	84	8	34	6·2
Leeds	6,775	6,033	4	..	663	2	73	1·1
Ouseburn, Great	361	319	2	..	37	..	3	0·8
Pateley Bridge	276	254	1	..	17	1	3	1·4
Penistone	651	548	2	..	80	12	9	3·2
Pontefract	1,955	1,626	1	..	225	1	102	5·3
Ripon	458	390	..	..	36	8	24	7·0
Rotherham	2,999	2,501	4	..	358	25	111	4·5
Saddleworth	664	575	..	..	62	..	27	4·1
Sedbergh	128	119	..	..	8	1	..	0·8
Selby	531	470	..	..	52	5	4	1·7
Settle	442	396	..	..	35	5	6	2·5
Sheffield	7,225	5,970	5	..	871	20	359	5·2
Skipton	1,198	981	10	..	135	12	60	6·0
Tadcaster	843	701	..	..	93	3	46	5·8
Thorne	510	432	..	..	56	5	17	4·3
Wakefield	3,482	2,953	3	..	328	19	179	5·7
Wetherby	436	336	1	..	46	15	38	12·2
Wharfedale	1,512	1,233	2	..	169	26	77	6·8
Wortley	1,319	1,126	3	..	124	11	55	5·0
ANGLESEY.								
Anglesey	404	355	..	..	34	3	12	3·7
Holyhead	615	524	..	..	60	7	24	5·0
BRECKNOCKSHIRE.								
Brecknock	495	436	..	..	48	..	11	2·2
Builth	230	206	..	..	19	1	4	2·2
Crickhowell	596	485	..	..	79	2	30	5·4
Hay	304	276	..	..	25	3	..	1·0
CARDIGANSHIRE.								
Aberaeron	352	312	..	..	31	1	8	2·6
Aberystwith	678	572	..	..	67	19	20	5·8
Cardigan	455	423	..	..	29	2	1	0·7
Lampeter	307	274	..	..	23	4	6	3·3
Tregaron	298	264	..	..	28	..	6	2·0
CARMARTHENSHIRE.								
Carmarthen	1,051	938	..	..	105	..	8	0·8
Llanelly	1,656	1,482	..	..	142	9	23	1·9
Llandilo Fawr	544	480	..	..	56	2	6	1·5
Llandovery	450	395	..	..	46	4	5	2·0
Newcastle-in-Emlyn	533	501	..	..	30	..	2	0·4

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for including Cases postponed.
CARNARVONSHIRE.								
Bangor and Beaumaris	1,087	978	..	..	90	4	15	1·7
Carnarvon	1,413	1,237	3	..	135	19	19	2·7
Conway	511	440	1	..	40	6	24	5·9
Pwllheli	634	566	..	..	51	12	5	2·7
DENBIGH.								
Llanrwst	407	362	..	..	34	7	4	2·7
Ruthin	392	357	..	..	33	1	1	0·5
Wrexham	1,906	1,675	..	..	135	9	37	2·4
FLINT.								
Asaph, St.	831	742	..	..	77	4	8	1·4
Hawarden	528	485	..	..	37	3	3	1·1
Holywell	1,424	1,251	..	..	119	12	42	3·8
GLAMORGAN.								
Bridgend and Cowbridge	1,215	1,041	..	..	105	7	62	5·7
Cardiff	3,626	2,938	6	..	380	9	293	8·3
Gower	354	327	..	..	17	4	6	2·8
Merthyr Tydfil	3,493	3,101	..	..	304	16	72	2·5
Neath	1,905	1,690	1	..	168	12	34	2·4
Pontardawe	701	630	..	..	57	6	8	2·0
Pontypridd	3,447	2,939	..	..	345	42	121	4·7
Swansea	3,604	3,180	..	..	314	25	85	3·1
MERIONETH.								
Bala	184	162	..	..	18	3	1	2·2
Corwen	502	418	1	..	53	5	25	6·0
Dolgelley	453	395	..	..	46	9	3	2·6
Festiniog	1,016	856	..	..	122	22	16	3·7
MONTGOMERY.								
Llanfyllin	554	493	..	..	37	13	11	4·3
Machynlleth	336	268	..	..	44	10	14	7·1
Forden	512	459	..	..	45	6	22	5·5
Newtown and Llanidloes	800	668	..	..	80	16	46	7·7
PEMBROKE.								
Haverfordwest	1,023	878	..	..	109	17	19	3·5
Narberth	588	518	..	..	37	14	19	5·6
Pembroke	993	871	..	..	93	23	6	2·9
RADNOR.								
Knighton	335	285	..	..	39	7	4	3·3
Rhayader	219	194	..	..	17	1	7	3·7

No. 88.

LIST (alphabetically arranged) of 284 UNIONS inspected during the Year 1882, with reference to the PROCEEDINGS under the Vaccination Acts, 1867 and 1871, and an ACCOUNT of the AWARDS made to the respective PUBLIC VACCINATORS out of Moneys voted by Parliament for that Purpose.

Union.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Abergavenny	3	3	..	6 12 0	27 17 0	59 9 0	Mr. Spear.
Abingdon	6	5	..	3 12 0	16 2 0	42 11 0	Dr. Stevens.
Alnwick	7	2	..	12 8 0	16 17 0	29 5 0	Mr. Power.
Alresford	2	2	..	6 8 0	7 8 0	13 16 0	Dr. Stevens.
Alton	4	3	..	5 1 0	11 18 0	24 5 0	Do.
Alverstoke	1	1	..	..	..	46 0 0	Do.
Amersham	6	3	..	8 9 0	23 0 0	40 10 0	„ Thorne.
Andover	5	5	..	1 10 0	14 15 0	35 13 0	„ Stevens.
Ashby-de-la-Zouch	6	2	..	15 8 0	22 6 0	37 14 0	„ Parsons.
Atcham	6	3	..	6 9 0	39 10 0	55 12 0	Do.
Axminster	12	2	..	6 12 0	7 12 0	14 4 0	„ Ballard.
Aylesbury	7	5	..	7 1 0	9 9 0	41 7 0	„ Thorne.
Aysgarth	2	..	..	..	..	..	Mr. Power.
Barnsley	5	5	..	19 9 0	83 4 0	238 19 0	Dr. Barry.
Barnstaple	10	7	1	0 4 0	20 8 0	49 14 8	„ Ballard.
Barrow-on-Soar	5	2	..	5 4 0	8 3 0	13 7 0	„ Parsons.
Barton Regis	6	6	..	17 10 0	75 18 0	226 16 0	„ Blaxall.
Basford	13	6	..	7 11 0	29 1 0	87 1 0	Do.
Basingstoke	6	6	..	0 8 0	13 18 0	36 2 0	„ Stevens.
Bath	5	2	1	3 9 4	8 15 0	17 12 4	„ Blaxall.
Bedale	3	3	..	3 12 0	13 13 0	23 0 0	Mr. Power.
Bedwelty	6	4	..	7 17 0	46 18 0	111 2 0	„ Spear.
Belford	2	..	..	..	..	..	„ Power.
Bellingham	6	..	..	..	..	..	Do
Beverley	5	3	..	4 2 0	22 5 0	31 3 0	Mr. Spear.
Bideford	7	4	..	0 7 0	10 12 0	24 4 0	Dr. Ballard.
Billesdon	3	..	..	..	..	..	„ Parsons.
Bingham	4	3	..	4 18 0	10 7 0	21 6 0	„ Blaxall.
Birmingham	1	1	..	..	..	247 11 0	„ Stevens.
Blaby	3	..	..	..	..	..	„ Parsons.
Blofield	3	2	..	11 11 0	14 5 0	25 16 0	„ Airy.
Bourn	7	1	..	..	..	9 15 0	„ Parsons.
Bradfield	6	6	..	4 12 0	11 13 0	43 9 0	„ Stevens.
Bramley	5	2	..	41 0 0	42 15 0	83 15 0	„ Parsons.
Brentford	8	4	1	14 3 0	41 9 0	121 17 4	Mr. Power.
Bridgnorth	3	2	..	3 15 0	8 2 0	11 17 0	Dr. Parsons.
Bridlington	4	..	..	..	..	..	Mr. Spear.
Brixworth	6	3	..	2 12 6	9 13 0	18 12 0	Dr. Parsons.
Bromsgrove	5	4	..	1 9 0	27 13 0	54 19 0	Mr. Spear.
Bromyard	3	..	..	..	..	..	Do.
Buckingham	3	3	..	4 4 0	14 15 0	26 8 0	Dr. Thorne.
Burton-on-Trent	8	4	1	4 4 0	45 4 0	83 3 8	„ Parsons.
Cannock	6	1	..	..	..	8 4 0	Dr. Parsons.
Catherington	1	1	..	..	..	5 11 0	„ Stevens.
Cheadle	5	2	..	10 3 0	14 10 0	24 13 0	„ Parsons.
Cheltenham	3	..	..	..	..	..	„ Blaxall.
Chepstow	5	3	..	7 2 0	14 11 0	31 10 0	Mr. Spear.
Chertsey	5	4	..	3 3 0	15 12 0	35 5 0	Dr. Stevens.
Chipping Sodbury	5	2	..	2 9 0	2 17 0	5 6 0	„ Blaxall.
Christchurch	2	2	..	8 14 0	41 1 0	49 15 0	„ Stevens.
Church Stretton	4	2	..	3 9 0	4 4 0	7 13 0	„ Parsons.

Union.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Cirencester	4	1	..	..	..	8 1 0	Dr. Blaxall.
Cleobury Mortimer	2	..	..	..	..	..	„ Parsons.
Clitheroe	5	5	..	5 1 0	34 7 0	67 8 0	Mr. Spear.
Clun	4	1	..	..	..	5 18 0	Dr. Parsons.
Cookham	4	1	..	..	..	17 6 0	„ Stevens.
Coventry	1	1	..	..	..	90 17 0	Do.
Crediton	11	2	1	0 4 8	3 15 0	7 10 8	„ Ballard.
Croydon	7	6	..	4 16 0	84 0 0	155 2 0	„ Stevens.
Darlington	5	2	..	6 1 0	55 7 0	61 8 0	Mr. Spear.
Daventry	6	2	..	6 8 0	6 17 0	13 5 0	Dr. Parsons.
Doncaster	7	5	..	7 17 0	51 6 0	120 5 0	„ Barry.
Dore	3	3	..	3 19 0	6 10 0	16 10 0	Mr. Spear.
Dorking	4	4	..	1 14 0	9 16 0	29 15 0	Dr. Stevens.
Drayton	5	1	1	1 16 0	9 16 0	11 12 0	„ Parsons.
Driffield	8	4	..	3 1 0	17 14 0	32 18 0	Mr. Spear.
Droitwich	6	5	..	1 9 0	22 3 0	45 5 0	Do.
Droxford	4	3	..	5 17 0	7 16 0	20 14 0	Dr. Stevens.
Dudley	8	6	1	16 10 8	63 6 0	254 0 8	Mr. Spear.
Dursley	3	1	..	..	..	8 15 0	Dr. Blaxall.
Easingwold	4	1	..	..	..	9 15 0	Mr. Power.
East Hampstead	4	1	..	..	..	4 6 0	Dr. Stevens.
East Retford	6	3	..	2 18 0	6 5 0	14 5 0	„ Blaxall.
East Stonehouse	1	1	..	..	..	46 13 0	„ Ballard.
Ecclesall Bierlow	3	1	..	..	..	131 3 0	„ Parsons.
Edmonton	13	8	..	3 19 0	90 14 0	220 19 0	Mr. Power.
Ellesmere	7	4	1	2 0 8	7 9 0	19 13 8	Dr. Parsons.
Epsom	8	7	..	3 1 0	17 11 0	60 15 0	„ Stevens.
Erpingham	3	1	..	..	..	13 8 0	„ Airy.
Eton	8	7	..	5 6 0	19 11 0	74 16 0	„ Thorne.
Evesham	5	3	..	1 6 0	13 14 0	21 10 0	Mr. Spear.
Fareham	5	4	..	3 14 0	14 13 0	30 15 0	Dr. Stevens.
Farnham	6	6	..	2 5 0	40 14 0	79 16 0	Do.
Faringdon	4	4	..	2 7 0	10 13 0	26 14 0	Do.
Flegg, East and West	4	..	..	..	..	..	„ Airy.
Fordingbridge	2	2	..	6 15 0	7 12 0	14 7 0	„ Stevens.
Fulham	3	2	..	31 10 0	45 11 0	77 1 0	Do.
George's, St.	4	4	..	7 5 0	75 14 0	142 17 0	Dr. Stevens.
Giles, St., and St. George, Bloomsbury.	1	1	..	..	..	58 3 0	Do.
Glanford Brigg	9	1	..	..	..	13 11 0	„ Parsons.
Gloucester	2	1	..	..	..	21 13 0	„ Blaxall.
Godstone	5	4	..	4 13 0	7 16 0	24 15 0	„ Stevens.
Goole	5	4	..	4 8 0	7 4 0	21 8 0	Mr. Spear.
Grantham	7	4	..	3 10 0	19 10 0	36 0 0	Dr. Parsons.
Greenwich	2	2	..	72 5 0	124 15 0	197 0 0	„ Stevens.
Guildford	9	9	..	3 4 0	18 18 0	80 18 0	Do.
Guisborough	4	1	1	23 6 0	38 17 0	62 3 0	Mr. Power.
Hambledon	5	4	..	4 14 0	11 19 0	32 8 0	Dr. Stevens.
Hartley Wintney	6	5	..	5 1 0	8 15 0	35 7 0	Do.
Havant	3	3	..	4 2 0	7 9 0	16 3 0	Do.
Helmsley Blackmoor	2	2	..	5 14 0	12 11 0	18 5 0	Mr. Power.
Hemsworth	4	3	..	2 18 0	21 12 0	39 10 0	Dr. Barry.
Hendon	7	3	..	4 19 0	69 5 0	88 14 0	Mr. Power.
Hereford	4	4	..	10 4 0	38 7 0	79 5 0	„ Spear.
Hinckley	5	2	..	12 0 0	26 17 0	38 17 0	Dr. Parsons.
Holbeach	6	..	..	..	..	..	Do.
Holbeck	1	1	..	..	..	73 6 0	„ Barry.
Holborn	4	4	..	45 17 0	64 3 0	225 2 0	„ Stevens.
Holsworthy	5	1	..	..	..	10 0 0	„ Ballard.
Honiton	12	2	..	1 15 0	11 5 0	13 0 0	Do.
Howden	4	1	..	..	..	5 18 0	Mr. Spear.
Hungerford	5	5	..	6 3 0	13 4 0	43 7 0	Dr. Stevens.
Hursley	1	1	..	..	..	5 6 0	Do.

Union.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Keighley	4	1	..	..	..	0 11 0	Dr. Barry.
Kensington	2	2	..	48 9 0	124 8 0	172 17 0	„ Stevens.
Kettering	4	1	..	..	..	12 6 0	„ Parsons.
Kidderminster	5	3	..	6 11 0	54 14 0	71 7 0	Mr. Spear.
Kingsbridge	5	3	..	1 16 0	8 4 0	12 16 0	Dr. Ballard.
Kingsclere	3	1	..	..	..	4 9 0	„ Stevens.
King's Norton	7	6	..	8 3 0	54 7 0	131 2 0	Mr. Spear.
Kingston-on-Hull	2	2	..	32 0 0	91 4 0	123 4 0	Dr. Airy.
Kingston-on-Thames	11	9	..	3 1 0	27 15 0	88 1 0	„ Stevens.
Kington	5	3	..	2 19 0	8 17 0	16 1 0	Mr. Spear.
Kirkby Moorside	1	1	..	..	..	13 11 0	„ Power.
Knaresborough		1	..	..	..	19 10 0	Dr. Barry.
Lancaster	5	2	..	3 3 0	15 3 0	18 6 0	Dr. Barry.
Ledbury	3	2	..	8 3 0	8 14 0	16 17 0	Mr. Spear.
Leeds	7	6	..	2 3 0	53 11 0	161 8 0	Dr. Stevens.
Leek	5	2	..	7 1 0	14 12 0	21 13 0	„ Parsons.
Leicester	2	2	..	25 16 0	73 19 0	99 15 0	Do.
Leigh	3	2	..	29 19 0	75 3 0	105 2 0	„ Barry
Leominster	3	3	..	2 4 0	24 17 0	33 19 0	Mr. Spear.
Leyburn	6	2	..	4 4 0	7 17 0	12 1 0	„ Power.
Lichfield	6	4	..	3 16 0	26 18 0	70 13 0	Dr. Parsons.
Liverpool	3	3	..	47 0 0	94 11 0	211 9 0	„ Stevens.
Loughborough	4	3	..	6 11 0	38 15 0	62 12 0	„ Parsons.
Ludlow	5	1	..	..	..	4 7 0	Do.
Lunesdale	5	5	..	0 6 0	10 3 0	19 12 0	„ Barry.
Lutterworth	5	4	..	3 12 0	9 7 0	22 14 0	„ Parsons.
Lymington	4	2	..	1 1 0	7 2 0	8 3 0	„ Stevens.
Madeley	4	2	..	8 1 0	27 3 0	35 4 0	Dr. Parsons.
Malton	6	3	..	8 2 0	10 5 0	28 0 0	Mr. Power.
Manchester	3	3	..	41 3 0	53 5 0	140 13 0	Dr. Stevens.
Mansfield	6	3	..	6 6 0	29 13 0	45 8 0	„ Blaxall.
Market Bosworth	6	4	..	2 2 0	12 8 0	25 10 0	„ Parsons.
Market Harborough	5	..	..	..	..	..	Do.
Martley	6	3	..	3 15 0	7 8 0	18 0 0	Mr. Spear.
Melton Mowbray	6	3	..	5 6 0	6 18 0	17 16 0	Dr. Parsons.
Middlesbrough	4	4	..	16 0 0	171 1 0	287 16 0	Mr. Power.
Monmouth	6	1	..	..	..	4 16 0	„ Spear.
Morpeth	8	3	..	9 14 0	40 17 0	61 15 0	„ Power.
Newark	9	4	..	1 2 0	5 9 0	13 17 0	Dr. Blaxall.
Newbury	3	2	..	9 2 0	14 8 0	23 10 0	„ Stevens.
Newcastle-under-Lyme	3	..	..	..	..	..	„ Parsons.
Newcastle-on-Tyne	3	4	..	28 0 0	58 5 0	147 3 0	„ Stevens.
Newent	3	1	..	..	..	7 1 0	„ Blaxall.
New Forest	5	5	..	0 18 0	13 2 0	28 12 0	„ Stevens.
Newport (Salop)	4	1	..	..	..	6 2 0	„ Parsons.
Newport Pagnell	9	5	..	1 3 0	24 12 0	48 8 0	„ Thorne.
Newton Abbot	11	6	..	5 8 0	37 5 0	103 5 0	„ Ballard.
Northallerton	4	1	..	..	..	2 18 0	Mr. Power.
Northampton	4	2	..	13 8 0	28 11 0	41 19 0	Dr. Parsons.
Northleach	5	3	..	2 5 0	7 18 0	15 12 0	„ Blaxall.
Norwich	1	..	..	..	..	..	„ Airy.
Nottingham	3	2	..	56 17 0	65 2 0	121 19 0	„ Blaxall.
Okehampton	6	1	..	..	..	6 0 0	Dr. Ballard.
Olave, St.	3	3	..	94 19 0	137 6 0	336 10 0	„ Stevens.
Oswestry	5	2	..	13 14 0	15 3 0	28 17 0	„ Parsons.
Oundle	4	2	..	6 1 0	10 8 0	16 9 0	Do.
Ouseburn, Great	6	3	..	3 1 0	11 0 0	19 15 0	„ Barry.
Pateley Bridge	3	2	..	2 7 0	9 11 0	11 18 0	Mr. Spear.
Patrington	5	1	..	..	..	4 11 0	Do.
Penistone	3	1	..	..	..	19 15 0	Dr. Parsons.
Pershore	5	4	..	5 11 0	10 19 0	29 16 0	Mr. Spear.
Peterborough	7	4	..	2 19 0	56 19 0	83 17 0	Dr. Parsons.
Petersfield	4	2	..	2 12 0	6 8 0	9 0 0	„ Stevens.

Union.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Pickering	3	1	..	..	..	4 8 0	Mr. Power.
Plymouth	1	2	..	62 0 0	70 16 0	132 16 0	Dr. Ballard.
Plympton St. Mary	5	3	..	8 13 0	9 17 0	27 5 0	Do.
Pocklington	6	4	..	1 19 0	6 10 0	18 13 0	Mr. Spear.
Pontefract	7	6	..	5 14 0	41 14 0	123 4 0	Dr. Barry.
Poplar	4	4	..	32 13 0	133 9 0	311 11 0	„ Stevens.
Portsea Island	1	1	..	..	..	158 2 0	Do.
Reading	1	1	..	..	..	68 5 0	Dr. Stevens.
Reeth	2	1	..	..	..	9 18 0	Mr. Power.
Reigate	4	3	..	7 3 0	23 19 0	44 5 0	Dr. Stevens.
Richmond (Surrey)	3	2	..	10 3 0	31 11 0	41 14 0	Do.
Richmond (Yorks)	5	3	..	4 5 0	8 18 0	19 3 0	Mr. Power.
Ringwood	1	1	..	..	..	13 16 0	Dr. Stevens.
Ripon	4	2	..	5 8 0	12 5 0	17 13 0	„ Barry.
Romsey	5	2	..	5 10 0	9 18 0	15 8 0	„ Stevens.
Ross	4	..	..	..	..	..	Mr. Spear.
Rothbury	6	..	..	..	..	..	„ Power.
Rotherham	8	4	..	12 0 0	85 5 0	178 9 0	Dr. Barry.
Saddleworth	1	1	..	..	..	47 11 0	Dr. Barry.
Salford	3	3	..	44 1 0	93 6 0	230 8 0	„ Stevens.
Saviour, St.	5	5	..	50 14 0	85 1 0	335 14 0	Do.
Scarborough	5	3	..	6 16 0	55 4 0	71 16 0	Mr. Power.
Sculcoates	6	2	..	80 7 0	92 17 0	173 4 0	Dr. Airy.
Sedbergh	2	1	..	..	..	4 5 0	„ Parsons.
Seisdon	4	4	..	4 12 0	9 10 0	30 0 0	Do.
Selby	5	3	1	1 11 0	28 18 0	41 17 8	Mr. Spear.
Settle	7	5	..	0 18 0	7 12 0	14 12 0	Dr. Barry.
Sheffield	6	6	..	12 5 0	55 12 0	203 14 0	„ Stevens.
Shifnal	4	1	..	..	..	8 3 0	„ Parsons.
Shipston-on-Stour	5	5	..	3 15 0	12 2 0	36 15 0	Mr. Spear.
Shoreditch	3	3	..	33 10 0	90 5 0	213 17 0	Dr. Stevens.
Skipton	8	2	..	12 13 0	30 16 0	43 9 0	„ Barry.
Skirlaugh	5	3	..	4 12 0	6 2 0	15 14 0	Mr. Spear.
Sleaford	7	5	..	4 14 0	18 18 0	55 8 0	Dr. Parsons.
Smallburgh	4	3	..	5 5 0	12 5 0	27 11 0	„ Airy.
Southampton	2	2	..	48 5 0	53 12 0	101 17 0	„ Stevens.
South Molton	9	7	1	0 6 8	9 11 0	37 6 8	„ Ballard.
South Shields	3	1	..	..	..	54 13 0	Mr. Spear.
South Stoneham	5	4	..	9 2 0	21 12 0	58 16 0	Dr. Stevens.
Southwell	7	4	..	1 18 0	9 0 0	22 10 0	„ Blaxall.
Spalding	8	..	..	..	..	..	„ Parsons.
Stafford	4	3	..	9 1 0	33 8 0	60 19 0	Do.
Staines	7	1	..	..	..	9 12 0	Mr. Power.
Stamford	7	3	..	1 0 0	27 6 0	32 6 0	Dr. Parsons.
Stepney	1	1	..	..	..	107 17 0	„ Stevens.
Stockbridge	2	2	..	7 7 0	8 7 0	15 14 0	Do.
Stoke Damerel	2	..	..	..	..	..	„ Ballard.
Stokesley	4	2	..	6 11 0	12 9 0	19 0 0	Mr. Power.
Stoke-upon-Trent	5	1	..	..	..	37 15 0	Dr. Parsons.
Stone	4	..	..	..	..	..	Do.
Stourbridge	7	5	..	12 8 0	45 6 0	125 6 0	Mr. Spear.
Stow-on-the-Wold	2	2	..	8 12 0	8 18 0	17 10 0	Dr. Blaxall.
Strand	1	..	..	..	..	..	„ Stevens.
Stroud	6	3	..	9 0 0	32 2 0	51 17 0	„ Blaxall.
Tadcaster	5	2	..	6 16 0	18 12 0	25 8 0	Dr. Barry.
Tamworth	3	2	..	4 12 0	22 12 0	27 4 0	„ Parsons.
Tavistock	7	2	..	4 4 0	10 15 0	14 19 0	„ Ballard.
Teesdale	7	3	..	3 12 0	13 4 0	26 1 0	Mr. Spear.
Tenbury	2	2	..	6 16 0	8 15 0	15 11 0	Do.
Tetbury	2	1	..	..	..	10 1 0	Dr. Blaxall.
Tewkesbury	4	2	..	6 7 0	16 3 0	22 10 0	Do.
Thirsk	6	2	1	2 17 0	5 19 0	13 0 8	Mr. Power.
Thomas, St.	17	6	1	1 4 0	9 18 0	36 4 4	Dr. Ballard.
Thornbury	4	2	..	0 14 0	12 19 0	13 13 0	„ Blaxall.
Thorne	6	3	..	3 16 0	15 3 0	26 2 0	Mr. Spear.

Union.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Thrapston	5	2	..	9 13 0	11 17 0	21 10 0	Dr. Parsons.
Tiverton	14	2	..	1 6 0	4 4 0	5 10 0	„ Ballard.
Todmorden	2	1	..	..	..	16 0 0	Mr. Spear.
Torrington	5	1	..	..	..	1 19 0	Dr. Ballard.
Totnes	11	1	..	..	..	14 1 0	Do.
Toxteth Park	2	1	..	..	..	89 12 0	„ Stevens.
Upton-on-Severn	5	4	..	1 7 0	13 12 0	24 12 0	Mr. Spear.
Uttoxeter	5	1	..	..	..	5 2 0	Dr. Parsons.
Uxbridge	7	5	..	4 2 0	26 16 0	70 9 0	Mr. Power.
Wallingford	3	2	..	9 5 0	12 1 0	21 6 0	Dr. Stevens.
Walsall	4	3	..	16 2 0	96 18 0	155 0 0	„ Parsons.
Walsingham	6	1	..	..	..	7 5 0	„ Airy.
Wantage	5	1	..	..	..	5 4 0	„ Stevens.
Wellingborough	5	..	1	..	..	5 15 4	„ Parsons.
Wellington (Salop)	3	..	..	..	..	..	Do.
Wells	4	3	..	5 2 0	12 16 0	28 4 0	„ Blaxall.
Wem	4	2	..	5 15 0	5 18 0	11 13 0	„ Parsons.
Weobly	3	2	..	8 12 0	8 14 0	17 6 0	Mr. Spear.
West Bromwich	5	4	..	17 0 0	51 6 0	168 18 0	Dr. Parsons.
Westbury-on-Severn	4	..	..	..	..	..	„ Blaxall.
West Derby	6	4	..	13 15 0	87 12 0	142 19 0	„ Stevens.
Westminster	2	1	..	..	..	24 8 0	Do.
Wetherby	6	3	..	4 0 0	5 9 0	13 17 0	„ Barry.
Wharfedale	3	..	..	..	..	..	Do.
Wheatenhurst	2	1	..	..	..	10 11 0	„ Blaxall.
Whitby	4	1	..	..	..	16 14 0	„ Power.
Whitchurch (Hants)	3	2	..	4 7 0	6 18 0	11 5 0	„ Stevens.
Whitchurch (Salop)	4	3	..	0 15 0	6 11 0	9 9 0	„ Parsons.
Whitechapel	1	1	..	..	..	150 17 0	„ Stevens.
Wight, Isle of	9	7	..	2 3 0	22 12 0	83 1 0	Do.
Winchcomb	2	..	..	..	..	..	„ Blaxall.
Winchester, New	4	4	..	5 0 0	34 2 0	57 7 0	„ Stevens.
Windsor	3	2	..	23 15 0	30 10 0	54 5 0	Do.
Winslow	3	1	..	..	..	9 15 0	„ Thorne.
Wokingham	4	3	..	6 16 0	16 17 0	34 6 0	„ Stevens.
Wolstanton and Burslem.	3	2	..	36 10 0	57 2 0	93 12 0	„ Parsons.
Wolverhampton	5	2	..	45 9 0	59 9 0	104 18 0	Do.
Worcester	1	1	..	..	..	45 0 0	Mr. Spear.
Worksop	7	3	..	2 9 0	25 19 0	35 3 0	Dr. Blaxall.
Wortley	3	1	..	..	..	22 1 0	„ Parsons.
Wycombe	12	8	..	3 7 0	15 6 0	66 4 0	„ Thorne.
Yarmouth, Great	1	1	..	..	..	52 11 0	Dr. Airy.
York	6	5	..	1 13 0	84 10 0	98 17 0	Mr. Spear.
Total	1,350	737	14	..	..	14,264 16 8	

No. 89.

Statistics of the National Vaccine Establishment and Educational Vaccine Stations.

Ia.—Staff at end of 1882.

N.B.—The Stations named in *italics* are Educational Vaccination Stations authorised by the Local Government Board.

——	Name.	Vaccination Stations.	Days and Hours of Attendance.
Vaccinators supplying lymph for the public service and salaried from the Parliamentary grant.	1. Dr. R. Cory	*Surrey Chapel*	Tues., Thurs.; 2.
	2. Mr. W. E. G. Pearse	*Tottenham Court Chapel,*	Mon., Wednes.; 1.
Parochial and other Vaccinators not salaried from the Parliamentary grant, but contributing lymph at a fixed rate of payment.	1. Mr. Ellis S. Guest	*Manchester*	Monday; 2.
	2–6. Dr. Edmund Robinson.	*Birmingham*	Monday; 11. Tuesday; 11. Wednesday; 11. Wednesday; 2. Thursday; 11.
	7. Mr. Roger Parker	*Liverpool*	Thursday; 2.30.
	8. Mr. E. L. Webb	*Pimlico*	Thursday; 10.
	9. Mr. J. Hawthorn	*Newcastle-on-Tyne.*	Wednesday; 3.
	10. Mr. W. E. G. Pearse	*Westminster*	Tuesday; 2.
	11–12. Mr. W. A. Sumner	*Marylebone*	Tuesday; 2. Wednesday; 10.
	13. Mr. C. T. Blackman	*Whitechapel*	Wednesday; 11.
	14. Mr. Frederick Holmes	*Leeds*	Tuesday; 2.30.
	15. Dr. Edward Lynes	Coventry	Tuesday; 12.
	16. Dr. Hugh Thomson	*Glasgow*	Monday; 12.
	17. Mr. Robert W. Dunn	*Strand*	Thursday; 11.
	18. Mr. Matthew Brownfield.	Bromley, Middlesex.	Tuesday; 3.
	19. Mr. W. Skinner	*Sheffield*	Tuesday; 3.
	20. Dr. A. C. Clarke	Salford	Thursday; 2.
	21. Mr. N. Miskin	Waterloo	Tuesday; 2.
	22. Mr. T. F. Morrish	Toxteth Park	Tuesday; 11.
	23. Dr. J. O. Affleck	*Edinburgh*	Wednes., Sat.; 12.
	24. Dr. R. Cory	*St. Thomas's Hospital.*	Wednes.; 11.30.
	25. Dr. D. C. McVail	*Glasgow West*	Monday; 1.
Teachers of Vaccination not supplying lymph.	Dr. W. Husband	*Edinburgh*	Wednes., Sat.; 12.
	Dr. R. D. Tannahill	*Glasgow*	Mon., Thurs.; 12.
	Mr. H. Lawrence	*Bristol*	Wednesday; 10.
	Mr. J. Gittins	*Horsleydown*	Monday; 2.
	Mr. William A. Budd	*Exeter*	Thursday; 3.

Ib.—Animal Vaccination.

The Animal Vaccine Station is at 95, Lamb's Conduit Street, where Dr. R. Cory and Mr. S. F. Murphy attend for the Vaccination of Children on Tuesdays and Thursdays, from 10.30 A.M. to 12 noon.

II.—Sources and Amount of Lymph Supply in 1882.

N.B.—The Stations named in *italics* are Educational Vaccination Stations authorised by the Local Government Board.

——	Vaccination Stations.	Number of Vaccinations performed at the Stations respectively.		Number of Charges of Lymph supplied from the Stations respectively.	
		Primary.	Re-vaccinations.	Charged Ivory Points.	Charged Tubes each estimated as equal to 10 Ivory Points.
Vaccinators salaried from the Parliamentary grant.	1. *Surrey Chapel* -	362	38	5,089	—
	2. *Tottenham Court Chapel.*	944	50	160*	737
	Total -	1,306	88	5,249	737
Parochial and other Vaccinators not salaried from the Parliamentary grant, but contributing lymph at a fixed rate of payment.	1. *Manchester*† -				
	2–6. *Birmingham* -	5,227	620	—	3,596
	7. *Liverpool* -	1,443	1	—	847
	8. *Pimlico* - -	482	84	—	492
	9. *Newcastle-on-Tyne.*	626	171	—	781
	10. *Westminster* -	833	95	—	951
	11–12. *Marylebone* -	1,646	147	—	141
	13. *Whitechapel* -	1,719	33	—	292
	14. *Leeds* - -	1,056	—	—	278
	15. Coventry -	984	4	—	1,414
	16. *Glasgow* -	906	1	—	282
	17. *Strand* - -	459	12	—	—
	18. Bromley - -	1,489	32	—	14
	19. *Sheffield* - -	1,146	—	—	331
	20. Salford - -	694	4	—	572
	21. Waterloo -	684	14	—	1,400
	22. Toxteth Park -	1,536	4	—	1,634
	23. *Edinburgh* -	1,187	7	—	35
	24. *St. Thomas's Hospital.*‡	228	8	—	64
	25. *Glasgow West* -	740	—	—	—
	Total -	23,085	1,237	—	13,124
	Grand Total -	24,391	1,325	5,249	13,861

* This number includes 40 charged glasses, each estimated as equal to four charged ivory points.

† No information received from this station.

‡ Information for five months only received from this station.

II.—Sources and Amount of Lymph, &c.—*continued.*

During the year, additional supplies (to the extent of 8,056 charged tubes) were obtained from the following gentlemen :—

Mr. C. C. Claremont, Hampstead Road.
Mr. W. Kempster, Battersea East.
Mr. G. A. Hepworth, Gloucester.
Mr. J. Oakman, Battersea West.
Mr. W. Arthur, Kennington.
Mr. H. May, Aston.
Mr. H. W. Newton, Newcastle-on-Tyne.
Mr. W. H. W. Wilkinson, Liverpool Road.
Mr. J. P. Purvis, Greenwich.
Mr. J. W. Kay, St. George's-in-the-East.
Dr. N. E. Roberts, Toxteth Park.
Dr. T. N. Orchard, Pendleton.
Mr. T. M. Johnson, Salford.

III.—Distribution of Human Lymph, 1882.

Number of applications :	
From Medical Practitioners in England and Wales	8,114
„ „ „ Scotland	247
„ the Army	439
„ the Navy and from the Emigration Department	105
„ India and the Colonies	157
„ Diplomatic and other Foreign Services	80
Total	9,742
Supplies sent out :—	
Charged ivory points	5,007
„ squares of glass	40
„ capillary tubes	21,483

IV. Calf-Lymph, 1882.

Number of applications	589
Amount received :—	
Charged points	3,655
„ tubes	471
Supplies sent out :—	
Charged ivory points	2,872
„ capillary tubes	270

Appendix H.

Metropolitan Common Poor Fund.

Page

No. 90. The Expenses incurred by Unions and Parishes under section 69 of "The Metropolitan Poor Act, 1867," and the Acts amending the same, during the Half Year ended Lady-day 1881, and repayable from the Metropolitan Common Poor Fund - - - - - - - - 334

No. 91. The Rateable Value and Amount of Contribution assessed on each Union, Parish, and Place in the Metropolis, the Expenditure repayable, and the Net Amounts contributed or received by Unions and Parishes in respect of the Half Year ended Lady-day 1881 - 335

No. 92. The Expenses incurred by Unions and Parishes under section 69 of "The Metropolitan Poor Act, 1867," and the Acts amending the same, during the Half Year ended Michaelmas 1881, and repayable from the Metropolitan Common Poor Fund - - - - - - 336

No. 93. The Rateable Value and Amount of Contribution assessed on each Union, Parish, and Place in the Metropolis, the Expenditure repayable, and the Net Amounts contributed or received by Unions and Parishes in respect of the Half Year ended Michaelmas 1881 - 337

No. 94. The Net Amounts received from the Fund by Unions and Parishes in respect of the Half Year ended at Lady-day 1868, and each of the parochial Years ended at Lady-day 1869–81 - - - - - - 338

No. 95. The Net Amounts contributed to the Fund by Unions, Parishes, and Places in respect of the Half Year ended at Lady-day 1868, and each of the parochial Years ended at Lady-day 1869–81 - - - - - 339

No. 96. The Aggregate Expenditure for the under-mentioned purposes charged upon the Fund in respect of the Half Year ended at Lady-day 1868 and each of the Parochial Years from 1869 to 1881 inclusive - - - 340

No. 90.

METROPOLITAN COMMON POOR FUND.—The EXPENSES incurred by the GUARDIANS of the several UNIONS and PARISHES in the METROPOLIS during the Half Year ended at LADY-DAY 1881, for the under-mentioned purposes, and repayable from the METROPOLITAN COMMON POOR FUND.

UNION OR PARISH.	1. Maintenance of Lunatics and Insane Poor.	2. Maintenance of Paupers suffering from Fever or Small-pox.	3. Medicine and Medical and Surgical Appliances.	4. Salaries of Officers.	5. Rations of Officers.	6. Compensation for loss of Office, &c.	7. Registration Fees.	8. Vaccination Fees and Expenses.	9. Maintenance of Pauper Children.	10. Expenses under Poor Houseless Acts.	11. Maintenance of In-door Paupers.	12. Education of Out-door Pauper Children.	13. Total.	Excess of Repayments from 14. Relatives, &c. over Cost of Maintenance of Insane Poor.	Excess of Repayments from 15. The Parliamentary Grant over Expenditure for Medicines, &c.	16. Net Amount Repayable.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Bethnal Green	2,009	815	79	2,202	673	—	191	195	2,756	—	4,315	12	13,247	—	—	13,247
Camberwell	1,969	535	237	3,435	798	—	242	264	2,593	707	3,281	61	14,122	—	—	14,122
Chelsea	1,248	153	25	2,926	553	48	121	154	2,554	—	2,688	1	10,471	—	—	10,471
Fulham	743	96	137	1,354	256	—	150	359	1,743	653	1,485	29	7,010	—	—	7,010
George's, St.	1,808	198	290	5,108	1,150	385	157	148	2,266	143	6,396	—	18,049	—	—	18,049
George, St., in-the-East	793	397	183	2,925	862	—	71	172	2,385	160	3,569	—	11,517	—	—	11,517
Giles, St., in-the-Fields, & St. George, Bloomsbury	834	54	93	1,543	272	—	59	67	1,237	543	2,860	—	7,562	—	—	7,562
Greenwich	1,562	540	230	3,270	661	62	181	171	2,645	284	3,705	74	13,385	—	—	13,385
Hackney	2,223	1,019	378	3,281	674	40	240	215	2,197	229	2,388	81	12,965	—	—	12,965
Hampstead	338	26	87	610	121	—	40	67	331	—	527	—	2,147	—	—	2,147
Holborn	4,810	493	272	3,723	1,164	83	193	242	3,421	175	8,770	—	23,346	—	—	23,346
Islington	1,857	455	331	2,844	547	—	372	391	2,250	218	4,387	172	13,824	—	—	13,824
Kensington	1,273	353	208	4,398	1,001	—	195	348	3,226	177	3,400	—	14,579	—	—	14,579
Lambeth	4,475	671	79	3,819	1,180	97	354	347	3,690	307	5,101	128	20,248	—	—	20,248
Lewisham	324	83	78	1,254	191	—	70	103	1,080	56	701	16	3,956	—	—	3,956
London, City of	3,471	102	480	6,199	1,352	317	56	38	2,500	217	4,622	1	19,355	—	—	19,355
Marylebone, St.	2,537	491	—	2,608	629	—	193	181	3,403	590	6,958	33	17,623	—	22	17,601
Mile End Old Town	1,500	265	258	1,646	263	—	155	178	1,835	124	2,007	—	8,231	—	—	8,231
Olave's, St.	2,369	341	427	3,383	913	162	199	221	3,732	271	3,626	39	15,683	—	—	15,683
Paddington	786	100	207	1,608	323	—	113	165	1,889	113	1,981	13	7,278	—	—	7,278
Pancras, St.	3,897	223	619	5,153	1,126	—	303	389	3,480	106	6,493	—	21,789	—	—	21,789
Poplar	1,387	273	197	3,806	793	—	176	257	2,654	—	3,614	—	13,157	—	—	13,157
Saviour's, St.	4,774	335	—	3,073	600	349	278	290	6,893	163	6,818	1	23,574	—	90	23,484
Shoreditch	2,934	478	193	3,054	649	—	186	204	1,896	—	3,414	—	13,008	—	—	13,008
Stepney	1,101	293	211	2,160	429	—	79	200	1,275	—	2,340	—	8,088	—	—	8,088
Strand	732	53	89	1,455	628	68	39	61	750	—	2,287	—	6,162	—	—	6,162
Wandsworth & Clapham	1,544	334	220	3,467	615	—	255	378	3,176	314	2,486	60	12,849	—	—	12,849
Westminster	736	76	62	1,596	529	87	48	57	1,326	—	2,140	6	6,663	—	—	6,663
Whitechapel	1,460	343	236	2,853	582	43	105	162	1,843	465	3,152	—	11,244	—	—	11,244
Woolwich	—	96	95	1,899	467	20	103	116	2,300	325	1,730	149	7,300	40	—	7,260
	55,499	9,691	6,001	86,652	20,001	1,761	4,924	6,140	73,306	6,340	107,241	876	378,432	40	112	378,280
Deduct excess of Repayments over Expenditure for the half-year	40	—	112	—	—	—	—	—	—	—	—	—	152	40	112	—
TOTALS	55,459	9,691	5,889	86,652	20,001	1,761	4,924	6,140	73,306	6,340	107,241	876	378,280	—	—	378,280

No. 91.

METROPOLITAN COMMON POOR FUND.—The ANNUAL RATEABLE VALUE of and AMOUNT OF CONTRIBUTION assessed on each UNION, PARISH, and PLACE in the METROPOLIS, the EXPENDITURE REPAYABLE, and the Net Amounts contributed or received by UNIONS and PARISHES in respect of the Half Year ended at LADY-DAY 1881.

1. UNIONS, PARISHES, AND PLACES.	2. Annual Rateable Value.	3. Amount of Contribution.	4. Expenditure Repayable.	5. Net Amount Contributed to Metropolitan Common Poor Fund.	6. Net Amount Received from Metropolitan Common Poor Fund.
	£	£	£	£	£
Bethnal Green, St. Matthew.	357,854	4,920	13,247	—	8,327
Camberwell, St. Giles	803,413	11,047	14,122	—	3,075
Chelsea, St. Luke	465,353	6,399	10,471	—	4,072
Fulham	545,854	7,506	7,010	496	—
George's, St.	2,280,929	31,363	18,049	13,314	—
George, St., in-the-East	199,237	2,740	11,517	—	8,777
Giles, St., in-the-Fields, & St. George, Bloomsbury.	358,418	4,928	7,562	—	2,634
Greenwich	617,252	8,487	13,385	—	4,898
Hackney	942,240	12,956	12,965	—	9
Hampstead, St. John	417,283	5,737	2,147	3,590	—
Holborn	920,319	12,654	23,346	—	10,692
Islington, St. Mary	1,445,226	19,872	13,824	6,048	—
Kensington, St. Mary Abbotts.	1,648,187	22,662	14,579	8,083	—
Lambeth, St. Mary	1,284,862	17,667	20,248	—	2,581
Lewisham	547,159	7,523	3,956	3,567	—
London, City of	3,537,561	48,642	19,355	29,287	—
Marylebone, St.	1,383,987	19,030	17,601	1,429	—
Mile End Old Town	335,344	4,611	8,231	—	3,620
Olave's, St.	775,330	10,661	15,683	—	5,022
Paddington	1,189,864	16,361	7,278	9,083	—
Pancras, St.	1,470,627	20,221	21,789	—	1,568
Poplar	670,476	9,219	13,157	—	3,938
Saviour's, St.	939,853	12,923	23,484	—	10,561
Shoreditch, St. Leonard	580,411	7,981	13,008	—	5,027
Stepney	318,469	4,379	8,088	—	3,709
Strand	700,441	9,631	6,162	3,469	—
Wandsworth & Clapham	1,183,278	16,270	12,849	3,421	—
Westminster	785,466	10,800	6,663	4,137	—
Whitechapel	370,334	5,092	11,244	—	6,152
Woolwich	279,847	3,848	7,260	—	3,412
Lincoln's Inn	18,800	258	—	258	—
TOTALS	27,373,674	376,388	378,280	86,182	88,074

No. 92.

METROPOLITAN COMMON POOR FUND.—The EXPENSES incurred by the GUARDIANS of the several UNIONS and PARISHES in the METROPOLIS during the Half Year ended at MICHAELMAS 1881, for the under-mentioned purposes, and repayable from the METROPOLITAN COMMON POOR FUND.

UNION OR PARISH.	1. Maintenance of Lunatics and Insane Poor.	2. Maintenance of Paupers suffering from Fever or Small-pox.	3. Medicine and Medical and Surgical Appliances.	4. Salaries of Officers.	5. Rations of Officers.	6. Compensation for loss of Office, &c.	7. Registration Fees.	8. Vaccination Fees and Expenses.	9. Maintenance of Pauper Children.	10. Expenses under House-less Poor Acts.	11. Maintenance of In-door Paupers.	12. Education of Out-door Pauper Children.	13. Total.	14. Repayments from Parliamentary Grant over Expenditure for Medicines, &c.	15. Net Amount Repayable.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Bethnal Green	5,868	1,395	26	2,139	719	—	221	437	2,776	—	4,514	14	18,109	—	18,109
Camberwell	4,042	1,029	275	3,247	892	—	266	423	2,908	141	3,032	63	16,368	—	16,368
Chelsea	2,971	357	—	2,158	608	32	134	294	2,335	—	2,798	1	11,688	11	11,677
Fulham	2,060	503	35	1,250	285	—	186	488	1,653	288	1,367	28	8,143	—	8,143
George's, St.	5,335	401	93	4,333	1,216	379	194	293	2,272	149	5,856	—	20,521	—	20,521
George, St., in-the-East	1,783	451	—	2,054	870	—	96	181	2,392	90	2,909	—	10,826	21	10,805
Giles, St., in-the-Fields, & St. George, Bloomsbury	1,705	168	17	1,325	291	—	69	96	1,235	778	2,869	—	8,553	—	8,553
Greenwich	3,676	1,773	52	2,478	725	62	220	411	3,142	302	3,826	97	16,764	—	16,764
Hackney	4,969	2,178	403	3,468	722	40	275	332	2,255	378	2,500	101	17,621	—	17,621
Hampstead	819	63	92	666	135	—	48	155	346	—	619	—	2,943	—	2,943
Holborn	10,223	1,134	594	5,466	1,253	130	249	312	3,520	362	9,038	—	32,281	—	32,281
Islington	5,760	1,228	180	2,180	606	—	403	507	2,275	258	4,483	182	18,062	—	18,062
Kensington	3,492	708	423	4,337	1,203	—	191	728	2,853	568	3,211	—	17,714	—	17,714
Lambeth	9,799	905	514	5,405	1,316	97	380	490	4,144	457	5,032	129	28,668	—	28,668
Lewisham	994	161	36	1,428	202	—	96	189	1,101	64	694	33	4,998	—	4,998
London, City of	7,112	157	197	5,163	1,600	317	95	122	2,529	371	4,753	1	22,417	—	22,417
Marylebone, St.	5,981	711	612	4,948	975	—	239	359	3,361	594	7,900	29	25,709	—	25,709
Mile End Old Town	2,573	627	—	1,056	289	—	167	212	1,980	94	2,272	—	9,270	21	9,249
Olave's, St.	4,942	752	436	3,010	949	139	241	277	4,117	250	3,858	57	19,028	—	19,028
Paddington	2,536	190	—	1,244	321	—	126	232	1,803	125	2,018	8	8,603	13	8,590
Pancras, St.	8,034	603	—	3,907	1,239	—	346	595	4,120	128	6,468	—	25,440	122	25,318
Poplar	3,421	479	—	3,097	864	—	258	402	2,678	—	3,517	—	14,716	15	14,701
Saviour's, St.	9,975	803	—	3,061	696	358	312	582	7,783	93	7,132	1	30,796	124	30,672
Shoreditch	6,472	2,248	52	2,567	659	—	221	441	1,956	—	3,657	—	18,273	—	18,273
Stepney	2,099	294	14	1,617	450	—	98	182	1,420	—	2,260	—	8,434	—	8,434
Strand	1,724	135	102	2,299	674	68	52	86	786	—	2,438	—	8,364	—	8,364
Wandsworth & Clapham	3,930	717	45	3,019	683	—	293	587	3,095	167	2,277	65	14,878	—	14,878
Westminster	2,053	126	26	1,520	583	87	63	93	1,243	—	2,279	7	8,080	—	8,080
Whitechapel	3,719	644	16	2,308	618	43	146	218	1,938	160	2,990	—	12,800	—	12,800
Woolwich	2,459	263	192	2,194	487	20	121	147	2,513	66	1,716	162	10,340	—	10,340
	130,526	21,203	4,432	82,944	22,130	1,772	5,806	9,871	76,529	5,883	108,333	978	470,407	327	470,080
Deduct excess of Repayments over Expenditure for the half year	—	—	327	—	—	—	—	—	—	—	—	—	327	327	—
TOTALS	130,526	21,203	4,105	82,944	22,130	1,772	5,806	9,871	76,529	5,883	108,333	978	470,080	—	470,080

No. 93.

METROPOLITAN COMMON POOR FUND.—The ANNUAL RATEABLE VALUE of and AMOUNT OF CONTRIBUTION assessed on each UNION, PARISH, and PLACE in the METROPOLIS, the EXPENDITURE REPAYABLE, and the Net Amounts contributed or received by UNIONS and PARISHES in respect of the Half Year ended at MICHAELMAS 1881.

1. UNIONS, PARISHES, AND PLACES.	2. Annual Rateable Value.	3. Amount of Contribution.	4. Expenditure Repayable.	5. Net Amount Contributed to Metropolitan Common Poor Fund.	6. Net Amount Received from Metropolitan Common Poor Fund.
	£	£	£	£	£
Bethnal Green, St. Matthew.	364,336	6,148	18,109	—	11,961
Camberwell, St. Giles	851,469	14,369	16,368	—	1,999
Chelsea, St. Luke	489,531	8,261	11,677	—	3,416
Fulham	584,951	9,871	8,143	1,728	—
George's, St.	2,293,015	38,695	20,521	18,174	—
George, St., in-the-East	199,752	3,370	10,805	—	7,435
Giles, St., in-the-Fields, & St. George, Bloomsbury.	362,206	6,112	8,553	—	2,441
Greenwich	630,677	10,643	16,764	—	6,121
Hackney	970,299	16,374	17,621	—	1,247
Hampstead, St. John	439,228	7,412	2,943	4,469	—
Holborn	923,537	15,584	32,281	—	16,697
Islington, St. Mary	1,485,436	25,067	18,062	7,005	—
Kensington, St. Mary Abbotts.	1,665,983	28,113	17,714	10,399	—
Lambeth, St. Mary	1,307,746	22,068	28,668	—	6,600
Lewisham	568,098	9,587	4,998	4,589	—
London, City of	3,566,394	60,183	22,417	37,766	—
Marylebone, St.	1,392,531	23,499	25,709	—	2,210
Mile End Old Town	337,513	5,696	9,249	—	3,553
Olave's, St.	794,444	13,406	19,028	—	5,622
Paddington	1,206,054	20,352	8,590	11,762	—
Pancras, St.	1,479,484	24,966	25,318	—	352
Poplar	682,074	11,510	14,701	—	3,191
Saviour's, St.	947,225	15,984	30,672	—	14,688
Shoreditch, St. Leonard	585,452	9,880	18,273	—	8,393
Stepney	319,653	5,394	8,434	—	3,040
Strand	716,470	12,091	8,364	3,727	—
Wandsworth & Clapham	1,239,944	20,924	14,878	6,046	—
Westminster	789,227	13,318	8,080	5,238	—
Whitechapel	371,520	6,269	12,800	—	6,531
Woolwich	289,349	4,883	10,340	—	5,457
Lincoln's Inn	18,800	317	—	317	—
TOTALS	27,872,398	470,346	470,080	111,220	110,954

No. 94.

METROPOLITAN COMMON POOR FUND.—NET AMOUNTS RECEIVED from the FUND by UNIONS and PARISHES in respect of the Half Year ended at LADY-DAY 1868, and each of the parochial Years ended at LADY-DAY 1869–81.

NAMES OF UNIONS AND PARISHES.	Half Year ended Lady-day 1868.	PAROCHIAL YEAR ENDED LADY-DAY.													TOTALS.
		1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Bethnal Green	4,819	10,856	11,168	16,359	20,051	20,625	17,618	19,545	22,279	17,954	20,416	19,256	19,400	20,465	240,811
Camberwell	639	—	—	—	172	230	1,910	3,161	3,221	4,916	4,243	4,547	4,750	3,843	31,632
Chelsea	760	2,279	1,601	1,261	1,708	2,016	2,285	4,928	4,929	5,686	5,215	6,883	6,901	7,756	54,208
Fulham	—	—	—	134	—	—	—	—	—	—	—	—	—	—	134
St. George-in-the-East	2,519	4,434	4,428	6,580	10,051	10,365	10,230	11,004	10,732	11,756	13,571	14,282	16,205	15,638	141,795
St. Giles and St. George	—	199	1,889	2,182	4,387	4,045	4,747	4,842	4,583	5,825	5,232	5,300	4,729	5,826	53,786
Greenwich	2,042	8,677	5,637	5,611	7,255	7,492	7,872	9,442	9,072	7,053	10,919	12,500	10,482	9,332	113,386
Hackney	—	—	—	—	—	—	—	413	—	3,400	—	—	—	—	3,813
Holborn	—	6,955	7,473	16,887	20,542	17,901	19,592	18,366	20,947	16,081	19,738	20,058	23,703	26,381	234,624
Lambeth	1,232	5,608	4,830	4,665	4,069	2,022	4,101	6,252	4,947	1,188	4,899	7,320	6,772	8,712	66,617
St. Marylebone	—	—	—	1,654	725	—	277	50	—	20	—	—	—	—	2,726
Mile End Old Town	997	2,232	4,178	5,200	4,169	4,147	4,182	3,349	3,891	4,594	5,119	5,401	6,236	6,752	60,447
St. Olave's	917	2,619	2,100	2,982	4,442	3,253	3,670	2,352	1,101	1,553	3,478	4,863	6,319	9,230	48,879
St. Pancras	—	5,775	4,856	7,478	9,865	6,070	6,267	4,795	5,415	8,947	7,754	6,912	4,698	2,948	81,780
Poplar	1,824	2,512	2,911	4,992	6,462	7,793	7,256	5,291	5,525	6,573	7,919	7,371	7,622	7,905	81,956
St. Saviour's	3,253	11,353	9,680	14,381	19,031	17,714	17,936	18,808	19,829	16,150	21,524	23,651	23,394	26,495	243,199
Shoreditch	1,044	8,402	6,579	15,991	11,784	10,764	11,106	9,132	9,444	10,856	8,767	10,172	10,861	11,291	136,193
Stepney	3,722	5,654	5,071	5,638	7,163	7,254	5,945	6,522	6,513	5,832	7,502	6,961	7,016	7,044	87,837
Strand	997	3,197	—	—	—	—	—	—	—	—	—	—	—	—	4,194
Whitechapel	4,598	6,847	5,680	8,796	10,175	10,048	10,817	8,591	9,699	10,789	12,439	12,652	12,772	13,073	136,976
Woolwich	—	183	2,688	2,075	5,370	5,906	6,936	8,110	8,133	7,921	7,702	8,499	8,552	8,680	80,755
Gray's Inn	—	—	—	—	—	—	—	—	—	—	14	20	—	38	72
	29,363	87,782	80,769	122,866	147,421	137,645	142,747	144,953	150,260	147,094	166,451	176,648	180,412	191,409	1,905,820

Note.—In the above Table the amounts received by Parishes added to or formed into Unions since Michaelmas 1867 have been dealt with as paid to the Unions in which they are now comprised.

No. 95.

METROPOLITAN COMMON POOR FUND.—NET AMOUNTS CONTRIBUTED to the FUND by UNIONS, PARISHES, and PLACES in respect of the Half Year ended at LADY-DAY 1868, and each of the parochial Years ended at LADY-DAY 1869–81.

NAMES OF UNIONS, PARISHES, AND PLACES.	Half Year ended Lady-day 1868.	PAROCHIAL YEAR ENDED LADY-DAY.													TOTALS.
		1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Camberwell	—	534	80	1,575	—	—	—	—	—	—	—	—	—	—	2,189
Fulham	657	1,995	451	—	1,105	909	1,091	1,714	1,116	2,433	1,946	2,306	1,282	2,069	19,074
George's, St.	5,783	16,310	22,235	23,205	30,195	27,879	28,016	29,087	25,017	25,247	32,517	25,299	31,471	29,691	351,952
Giles, St., and St. George	885	—	—	—	—	—	—	—	—	—	—	—	—	—	885
Hackney	1,601	1,790	1,278	2,373	1,964	1,652	908	—	1,110	—	1,779	2,276	2,608	1,243	20,582
Hampstead	794	3,124	3,118	4,412	5,364	5,764	5,988	6,715	6,757	6,157	7,290	7,632	7,571	7,806	78,492
Holborn	2,092	—	—	—	—	—	—	—	—	—	—	—	—	—	2,092
Islington	3,619	5,107	6,467	7,891	9,295	8,855	8,637	9,313	6,656	9,711	9,175	10,904	11,358	13,140	120,128
Kensington	3,710	6,510	9,249	10,827	14,905	13,356	14,989	16,358	17,690	16,162	20,080	18,778	18,150	19,730	200,494
Lewisham	918	2,308	2,636	5,900	7,965	7,938	8,084	8,043	8,568	7,518	7,506	8,598	8,475	8,348	92,805
London, City of	9,635	21,985	23,863	31,685	38,765	40,116	41,141	41,170	42,731	45,595	47,955	61,079	60,278	64,068	570,066
Marylebone, St.	187	2,012	1,305	—	—	242	—	—	4,085	—	2,029	2,231	1,974	456	14,521
Paddington	4,466	11,191	11,595	17,707	19,640	18,884	19,163	19,847	19,869	17,377	18,832	19,720	19,937	19,573	237,801
Pancras, St	296	—	—	—	—	—	—	—	—	—	—	—	—	—	296
Strand	—	—	360	2,427	2,481	536	1,346	2,336	3,044	3,000	4,993	5,425	5,075	6,209	37,232
Wandsworth and Clapham	1,859	3,210	4,427	5,444	5,959	7,081	5,984	5,644	6,757	6,835	6,682	7,868	6,816	9,109	83,675
Westminster	837	2,391	1,120	4,872	6,128	4,545	4,796	4,800	5,324	5,542	5,794	5,778	5,661	8,347	65,935
Woolwich	2,136	—	—	—	—	—	—	—	—	—	—	—	—	—	2,136
The Charterhouse	16	42	42	52	65	64	64	63	314	300	—	—	—	—	1,022
Gray's Inn	105	277	289	359	445	446	461	449	434	*217	—	—	—	—	3,482
Inner Temple	166	435	435	538	654	655	661	645	591	*296	—	—	—	—	5,076
Middle Temple	108	284	284	352	437	427	430	419	323	*162	—	—	—	—	3,226
Lincoln's Inn	144	378	388	480	596	582	586	573	518	494	541	553	553	558	6,944
	40,014	79,883	89,622	120,099	145,963	139,931	142,345	147,176	150,904	147,046	167,119	178,447	181,209	190,347	1,920,105

Note.— In the above Table the amounts paid by Unions and Parishes added to or formed into Unions since Michaelmas 1867 have been dealt with as paid by the Unions in which they are now comprised.

* These amounts are for the half year ended Michaelmas 1876; the subsequent payments being included in the Holborn and City of London Unions.

No. 96.

METROPOLITAN COMMON POOR FUND.—AGGREGATE EXPENDITURE for the under-mentioned purposes charged upon the FUND in respect of the Half Year ended at LADY-DAY 1868 and each of the Parochial Years from 1869 to 1881 inclusive.

ITEMS.	Half Year ended Lady-day 1868.	PAROCHIAL YEARS ENDED LADY-DAY.													TOTALS.
		1869.	1870.	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	
PAUPERS:—	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Maintenance of the—															
In-door Poor	—	—	—	80,760	168,515	174,810	178,451	179,256	176,959	185,616	192,489	200,440	207,682	213,626	1,958,604
Pauper Children	34,474	91,079	86,381	97,727	100,186	109,273	117,799	112,638	112,671	117,394	133,083	137,453	134,997	145,864	1,531,019
Insane Poor	39,052	154,491	162,149	194,912	195,166	194,551	202,833	188,899	184,438	132,344	159,008	168,807	167,660	181,762	2,326,072
Paupers suffering from Small-pox or Fevers	—	—	—	—	5,302	25,692	8,503	6,324	6,564	5,217	11,675	17,620	15,322	9,528	15,343	127,095
School Fees for Out-door Pauper Children, under the Education Acts	—	—	—	—	—	—	—	98	1,178	1,662	1,397	1,517	1,717	1,739	1,837	11,145
Vagrants. — Expenses under Houseless Poor Act	5,896	12,047	11,313	9,028	8,534	7,915	7,239	6,791	6,750	8,528	8,681	10,262	11,309	12,751	127,044
MEDICAL RELIEF:—															
Medicine and Medical and Surgical Appliances	2,751	8,103	7,286	8,121	9,535	7,880	6,958	7,914	8,188	8,257	8,760	9,361	9,507	10,528	113,149
PAID OFFICERS:—															
Salaries	44,281	103,714	98,733	108,345	118,309	119,327	120,654	128,093	134,507	139,300	149,211	156,121	162,232	165,620	1,748,447
Rations	—	—	—	16,654	23,000	23,486	25,252	27,347	29,454	32,409	34,302	37,003	39,136	40,972	329,015
Compensation for loss of office	—	—	467	1,210	4,681	3,436	3,155	4,005	3,048	3,238	3,303	3,689	3,551	3,522	37,305
REGISTRATION FEES	2,558	10,077	9,972	10,213	9,803	9,948	10,031	10,011	10,775	10,408	10,580	10,838	10,987	10,980	137,181
VACCINATION FEES AND EXPENSES	1,045	5,372	4,965	8,604	15,678	9,582	9,061	9,430	9,723	11,347	13,277	11,541	11,320	12,196	133,141
TOTAL	130,057	384,883	381,266	540,876	679,099	668,716	687,855	682,126	683,392	661,913	731,831	762,554	769,648	815,001	8,579,217

Appendix I.

Paid Officers, &c.

		Page
No. 97.	Paid Officers.—Number Resigned and Dismissed in England and Wales (exclusive of the Metropolis) in 1882 -	342
No. 98.	Ditto.—Ditto in the Metropolis only, in 1882 - -	343
No. 99.	Ditto.—Number superannuated in England and Wales (inclusive of the Metropolis) in 1882 - - -	344

No. 97.

PAID OFFICERS.—STATEMENT of the NUMBER of PAID OFFICERS in the several UNIONS of ENGLAND and WALES (the Metropolitan District excluded) who RESIGNED on account of irregularities, or were DISMISSED, during the Year ended the 31st December, 1882.

Total Number of Paid Officers (sanctioned by the L.G.Board) in England and Wales (Metropolis excluded) in 1882.		Office.	Voluntary Resignations to avoid inquiry.	Forced Resignations.	Dismissals.	Total of Resignations and Dismissals, 1882.	Total of Resignations and Dismissals, 1881.
624	Union.	Clerk	1	2	–	3	5
100	Union.	Assistant Clerk	–	–	–	–	2
617	Union.	Treasurer	–	–	–	–	–
494	Workhouse.	Chaplain	–	–	–	–	1
692	Workhouse.	Medical Officer	–	–	–	–	2
650	Workhouse.	Master of Workhouse	2	7	1	10	6
15	Workhouse.	Superintendent of School	–	–	–	–	–
657	Workhouse.	Matron of Workhouse	–	4	–	4	3
19	Workhouse.	Matron of School	–	–	–	–	–
251	Workhouse.	Schoolmaster	3	–	–	3	4
474	Workhouse.	Schoolmistress	1	–	1	2	3
511	Workhouse.	Porter	2	2	16	20	25
176	Workhouse.	Nurse, Male	3	–	3	6	6
1,063	Workhouse.	Nurse, Female	6	7	15	28	26
12	Workhouse.	Dispenser	–	–	–	–	–
271	Workhouse.	Industrial Trainer	–	1	5	6	8
100	Workhouse.	Superintendent of Labour	–	–	–	–	–
40	Workhouse.	Superintendent of Vagrants	–	–	–	–	2
3,361*	District.	Medical Officer	1	4	2	7	9
25	District.	Dispenser	–	–	–	–	–
1,397	District.	Relieving Officer	4	7	3	14	12
58	District.	Assistant Relieving Officer	–	–	–	–	–
808	District.	Collector of the Guardians	1	1	–	2	6
1,470	District.	Vaccination Officer	–	1	–	1	5
117	District.	Vestry Clerk	–	–	–	–	–
1,791	District.	Collector of Poor Rates	12	6	4	22	21
279†	District.	Assistant Overseer	4	7	7	18	16
1,586	District.	Other Officers & Assistants	1	2	9	12	9
17,658		Totals	41	51	66	158	171

* Owing to several Medical Officers holding more than one appointment, and to a continual change taking place, this number rather represents so many *Offices* than individual Medical Officers.

† This is the total number of Assistant Overseers appointed under Orders of the Board. The number dismissed, &c. comprises the Assistant Overseers appointed under 59 Geo. 3. c. 12. s. 7.

No. 98.

PAID OFFICERS.—STATEMENT of the NUMBER of PAID OFFICERS* in the METROPOLITAN UNIONS, PARISHES, and DISTRICTS who RESIGNED on account of irregularities or were DISMISSED during the Year ended the 31st December 1882.

No. of Officers.		Office.	Voluntary Resignation to avoid inquiry.	Forced Resignation.	Dismissal.	Total.
40	Workhouse, Infirmary, Asylum, or School.	Clerk	–	–	–	–
86		Assistant Clerk	–	–	–	–
40		Treasurer	–	–	–	–
83		Chaplain	–	–	–	–
109		Medical Officer (including Assistant Medical Officer)	–	–	–	–
24		Dispenser	–	–	1	1
85		Master, Steward, or Superintendent	–	1	–	1
88		Matron	–	–	–	–
59		Schoolmaster	–	–	1	1
46		Schoolmistress	–	–	2	2
105		Porter	1	1	1	3
1,146		Nurse or Attendant on Lunatics	8	3	15	26
178		Industrial Trainer	1	–	3	4
56		Superintendent of Labour	–	1	1	2
47		Superintendent of Vagrants	–	–	–	–
153	District.	Medical Officer	–	–	–	–
47		Dispenser	–	–	–	–
40		Vaccination Officer	1	–	–	1
39		Analyst	–	–	–	–
141		Relieving Officer	–	1	–	1
28		Assistant Relieving Officer	–	–	–	–
34		Collector to Guardians	–	–	–	–
12		Pay Clerk or Out Relief Distributor or Storekeeper	–	–	–	–
25		Vestry Clerk	–	–	–	–
45		Collector of Poor Rates appointed under the Board's Orders	–	–	–	–
2,756		Totals	11	7	24	42
2,560		Totals during year ended 31st December 1881	7	8	28	43

* Excluding all subordinate officers employed by the Guardians or Managers of whose appointments the approval of the Board is not required.

No. 99.

1882.

NUMBER OF OFFICERS SUPERANNUATED - 70, namely:—

2 Medical Officers of the Workhouse.
6 Masters.
1 Superintendent of School.
6 Matrons.
1 Matron of School.
2 Schoolmasters.
3 Porters.
2 Nurses.
1 Assistant Master.
2 Attendants.
1 Industrial Trainer.
2 Shoemakers.
4 Bakers.
1 Servant.
1 Superintendent of Laundry.
1 Assistant Engineer.
5 District Medical Officers.
*19 Relieving Officers.
1 Vaccination Officer.
4 Collectors of Poor Rates.
1 Assistant Overseeer.
2 Collectors of Parish Rates.
1 Assistant Relieving Officer.
1 Warrant Officer in Out-Relief Department.

* Of these 11 were also Registrars of Births and Deaths, 8 Vaccination Officers, 7 Collectors of the Guardians, 2 School Attendance Officers, and 9 Inquiry Officers.

	£	*s.*	*d.*
Total Salaries and Emoluments of the 70 Officers, including a sum of 1,336*l.* 11*s.* 1*d.*, being the estimated value of the board, lodging, &c. of the officers - - - - - -	6,922	15	10
Amount of superannuation allowances granted - -	2,772	1	6

Appendix J.

Local Taxation Returns.

	Page
No. 100. Summary Statement of Local Taxation for the Year 1880–81 - - - - - - - -	346
No. 101. Ditto, County Rates, 1880–81 - -	359
No. 102. Parliamentary Grants in aid of Local Taxation.—Statement showing the Amount paid to each Union, &c. in England and Wales during the Year ended Lady-day 1882 - - - - - - - -	360
No. 103. Parliamentary Grant in aid of Disturnpiked and Main Roads.—Statement showing the Amounts paid to Highway Authorities in England and North Wales during the Year ended Lady-day 1883 - - - -	372

No. 100.

Summary Statement of the Local Taxation of England during the Year 1880–81.

Eleventh annual Return.

1. This is the Eleventh Annual Return of Local Taxation which has been prepared and issued under the direction of the Local Government Board.

Local and Imperial Taxation.

2. The total raised during the year 1880–81 by Local Taxation was 32,434,123*l.*; the Parliamentary Grants which are shown in the Returns principally in aid of Rates were 2,088,807*l.*

	Local Taxation.	Grants in Aid from Imperial Taxation.	Total of Taxation for Local Purposes.
	£	£	£
1. Levied by Rates on rateable property - - -	26,808,225	- - -	28,895,197
Parliamentary Grants in aid of Rates - - - -	- - -	2,086,972	
2. Levied by Tolls, Dues, and Rents on traffic - - -	5,197,152	- - -	5,198,987
Parliamentary Grants in aid of tolls, dues, and rents on traffic	- - -	1,835	
3. Levied by Duties on consumable articles - - -	428,746	- - -	428,746
Parliamentary Grants in aid of said duties - - -	- - -	- - -	
Total - £	32,434,123	2,088,807	34,522,930

Treasury subvention.

3. With reference to this Table it should be remembered, that the Returns made to the Local Government Board do not state the whole amount voted by Parliament in aid of Local Taxation. The total subvention provided for England with respect to the year 1880–81, was, as shown by the Estimates, 2,901,314*l.*, or upwards of 812,000*l.* beyond the sum given in the above Table, which includes only the sums actually appearing in the Returns of the Local Authorities.

4. A Summary of Local Rates is shown hereunder:— Rates.

TABLE I.—RATES.

SOURCE OF REVENUE.	Year of the Return.	Number of separate Authorities Returned.	Receipt.				TOTAL Expenditure.
			Rates.	Treasury Subventions.	All other Sources, including Loans.	TOTAL.	
			£	£	£	£	£
1.—Poor Rate, *excluding* Precept Rates paid thereout	1880–81	647 Unions. 14,931 Parishes.	7,969,845	617,631	*921,153	9,508,629	9,058,019
2.—County and Police Rates (less contributions to Main Roads)	1880–81	63	1,456,807	548,743	708,080	2,713,630	2,695,221
3.—Borough and Town Police Rates (*excluding* School Board Rates) (*See* Table II.)	1880–81	240	1,349,128	386,289	1,271,244	3,006,661	2,882,995
4.—Highway Rates	1879–80	424 Boards. 5,804 Parishes.	1,821,041	—	46,643	1,867,684	1,854,232
5.—Metropolitan Local Management Rate, *excluding* Precept Rates paid thereout	1880–81	43	1,754,341	—	488,884	2,243,225	2,173,306
6.—Metropolitan Board of Works, *excluding* Coal and Wine Duties (*See* Table II.)	1880	1	620,957	10,000	2,251,205	2,882,162	3,565,436
7.—Metropolitan Police Rate (*See* Table II.)	1880–81	1	555,844	451,182	148,578	1,155,604	1,148,420
8.—City of London Police Rate	1880	1	75,511	—	30,861	106,372	100,601
9.—City of London Ward Rate	1880		6,142	—	—	6,142	5,615
10.—Urban Sanitary Rates: (*a*) Raised by Town Councils	1880–81	222	6,446,051	8,283	8,149,078	14,603,412	14,518,806
(*b*) Raised by other Sanitary Authorities (inclusive of amount paid to Joint Boards) [*See* Table II. (*a*) and (*b*).]	1880–81	754	2,465,971	15,074	*2,361,866	4,842,911	2,984,941
11.—Rural Sanitary Rate	1880–81	577	283,896	49,285	*287,570	620,751	358,407
12.—Port Sanitary Rate	1880–81	41	† [2,385]	485	228	3,098	6,654
13.—Lighting and Watching Rate	1880–81	194	37,884	—	646	38,530	38,113
14.—Sewers Rate	1880–81	55	57,817	—	17,552	75,369	69,810
15.—Drainage and Embankment Rate (*See* Table II.)	1880–81	159	202,380	—	139,936	342,316	340,252
16.—Burial Board Rate (*See* Table II.)	1880–81	552	130,229	—	136,392	266,621	257,286
17.—School Board Rate (*See* Table II.)	1879–80	2,051	1,562,385	—	1,800,391	3,362,776	3,278,327
18.—Church Rate	1880–81	218	11,996	—	1,271	13,267	13,189
TOTAL of RATES		26,978	26,808,225	2,086,972	18,761,578	47,656,775	45,349,630

* (1.)—"Poor Rate," as summarised above, contains in column of "All other Sources, &c.," an amount of 500,280*l.* raised upon loan; the Rural Sanitary Rate, 267,773*l.*; and the Urban Sanitary, 10. (*b*), 1,771,733*l.*; otherwise the loans raised in these cases are not shown by the detailed accounts, nor does the expenditure out of loans appear in the accounts of these authorities.

† Port Sanitary Authority.—The sum of 2,385*l.* is excluded from the total of "Rates" and of "Receipts," to avoid a duplicate reckoning of that sum.

Tolls, Dues, and Rents.

5. Returns of certain of the Authorities who are represented in Table I. are also shown in the Statement hereunder, so far as their revenues arise from Tolls, Dues, Fees, and Rents :—

TABLE II.—TOLLS, DUES, FEES, AND RENTS.

SOURCE OF REVENUE.	Year of the Return.	Number of separate Authorities returned.	Receipt.				TOTAL Expenditure.
			Tolls, Dues, Fees, and Rents.	Treasury Subventions.	All other Sources, including Loans.	TOTAL.	
			£	£	£	£	£
19.—Corporation of London	1880	*See* Table I.	298,764	1,835	471,422	772,021	765,582
20.—Corporation of London (Blackfriars and Clerkenwell Improvements) - -	1880	*See* Table I.	906	—	23,117	24,023	57,922
21.—Borough Tolls, Dues, and Rents - - (*See also* Table I.)	1880–81	„	585,399	—	—	585,399	585,399
22.—Metropolitan Board of Works - - (*See also* Table I.)	1880	„	98,977	—	—	98,977	98,977
23.—Urban Sanitary Authorities :							
(*a*) Town Councils -	1880–81	„	307,461	—	—	307,461	307,461
(*b*) Other Sanitary Authorities, including Joint Boards - (*See* Table I.)	1880–81	„	40,695	—	—	40,695	40,695
24.—Metropolitan Police - (*See* Table I.)	1880–81	„	27,655	—	—	27,655	27,655
25.—Drainage and Embankment - - -	1880–81	„	46,266	—	—	4,626	4,626
26.—Turnpike Trusts -	1879–80	240	237,741	—	18,074	255,815	271,880
27.—Markets and Fair Tolls	1880–81	17	27,171	—	254	27,425	21,505
28.—Bridge and Ferry Tolls	1880–81	37	64,714	—	1,657	66,371	55,621
29.—Burial Board Fees - (*See also* Table I.)	1880–81	*See* Table I.	152,550	—	—	152,550	152,550
30.—School Board Fees - (*See also* Table I.)	1879–80	*See* Table I.	372,745*	—	—	372,745	372,745
31.—Light Dues - -	1879–80	1	422,255	—	4,733	426,988	348,426
32.—Pilotage Dues - -	1880	19†	398,606	—	2,349	400,955	400,548
33.—Harbour Dues - -	1880–81	66	2,156,887	—	1,440,756	3,597,643	3,213,862
TOTAL of TOLLS, DUES, and RENTS		380	5,197,152	1,835	1,962,362	7,161,349	6,725,454

* School Board Fees.—The sum received for sale of Books to children is included in this sum.
† Pilotage.—Counting all the Ports under the Trinity House of Deptford Strond, as one authority, and all those under the Trinity House of Kingston-on-Hull as one only.

Duties.

6. The only Local Imposts derived from duties, and which are discriminated in the local Returns, are those levied by the City of London.

TABLE III.—DUTIES.

SOURCE OF REVENUE.	Year of the Return.	Number of Authorities.	Receipt.			TOTAL Expenditure.
			Duties.	All other Sources, including Loans.	TOTAL.	
			£	£	£	£
33.—City of London :						
Coal Duty, at 9*d.* -	1880	1	273,197*	—	273,197	515,791*
City's Coal Duty, at 4*d.* -			121,421*	—	121,421	
Wine Duty - -			10,803	500	11,303	
City's Grain Duty -			23,325	99,261	122,586	
TOTAL of DUTIES -		1	428,746	99,761	528,507	515,791

* After deducting the drawback on Coals, which was 57,148*l.* on the 9*d.* duty, and 25,399*l.* on the 4*d.* duty.

STATEMENT of LOCAL LOANS with the Sums Outstanding at the close of the Year 1880–81. Loan transactions.

SECURITY OR AUTHORITY.	Loans Raised during the Year.	Loans Paid off with Interest during the Year.	Loans Outstanding at the close of the Year.
I.—Rates chiefly—	£	£	£
Poor Law	500,280	416,194	5,271,303
County	307,628	386,624	2,995,311
Borough	637,818	710,920	6,495,112
Highway	4,990	6,464	49,580
Metropolitan Local Management	169,800	259,098	2,411,477
Metropolitan Board of Works	1,929,251	436,533	15,245,229
Urban Sanitary:—			
(*a*) Raised by Town Councils	5,585,404	4,783,862	53,213,834
(*b*) Raised by other Authority, including Joint Boards	1,771,733	839,808	12,818,333
Rural Sanitary	267,773	66,628	1,081,056
Port Sanitary	-	186	5,237
Sewers Commission	*	7,415	78,519
Drainage and Embankment Commission	94,466	135,899	1,535,740
Burial Board	108,447	153,354	1,717,612
School Board	1,145,191	484,053	10,858,988
Church	-	7,927	41,800
Totals of I. £	12,522,781	8,694,965	113,819,131
II.—Tolls, Dues, and Rents chiefly—			
City of London	421,891	339,600	5,274,800
Turnpike Trustees	-	76,925	550,237
Bridge and Ferry Commissions	416	6,071	210,926
Market and Fair Commissions	-	4,353	83,422
Harbour Commissions	1,286,337	1,848,975	24,396,722
Totals of II. £	1,708,644	2,275,924	30,516,107
III.—Duties—			
City of London Coal and Grain Duties	-	-	Included with City of London Loans.
GRAND TOTALS £	14,231,425	10,970,889	144,335,238

* The loans in these accounts are not separated from "other sources of income."

General Summary.

LOCAL TAXATION SUMMARY, 1880–81.

Principal Source of Revenue.	Amount of Local Impost.	Other Sources, including Treasury Grants and ordinary Loans.	Total Receipt.	Total Expenditure.	Loans Outstanding at the Close of the respective Accounts.
	£	£	£	£	£
Table I.—RATES - - -	26,808,225	20,848,550	47,656,775	45,349,630	113,819,131
„ II.—TOLLS, DUES, AND RENTS - -	5,197,152	1,964,197	7,161,349	6,725,454	30,516,107
„ III.—DUTIES - - -	428,746	99,761	528,507	515,791	—
Grand Total - £	32,434,123	22,912,508	55,346,631	52,590,875	144,335,238

Rates—Urban and Rural.

The following Table shows the distribution of upwards of 26,500,000*l.* of rates in relation to the urban and rural districts of the kingdom.

Revenue obtained from Rates—Year 1880–81.

Local Rates.	Amount.	Total.
1. Urban, wholly or chiefly :		
(*a.*) *Extra-Metropolitan:*	£	£
Borough Rate - - -	1,349,128	
Urban Sanitary Rate - -	8,912,022	10,274,829
Lighting and Watching Rate (Leeds) - - - -	13,679	
(*b.*) *Metropolitan:*		
Poor Rate - - - -	1,807,197	
Local Management Rate - -	1,754,341	
Board of Works Rate - -	620,957	
Metropolitan Police Rate -	555,844	5,413,255
City of London Police Rate -	75,511	
Ditto Ward Rate -	6,142	
Burial Board Rate - -	7,696	
School Board Rate - -	585,567	
2. Urban and Rural :		
Poor Rate (Extra-Metropolitan) -	6,162,648	
Burial Board Rate (Extra-Metropolitan)	122,533	7,273,995
School Board Rate (Extra-Metropolitan)	976,818	
Church Rate - - - - -	11,996	
3. Rural, wholly or chiefly :		
County Rate - - - - -	900,084	
Rural Police Rate - - - -	556,723	
Highway Rate - - - - -	1,821,041	3,585,949
Rural Sanitary Rate - - - -	283,896	
Lighting and Watching Rate (less Leeds) - - - - - -	24,205	
£	26,548,028	

*** Sewers Rates and Drainage Rates, not being levied for General Purposes, are excluded from this Statement.

Expenditure from Local Taxes

The series of tabulations hereunder show the respective items of disbursement which form the "Total Expenditure" in the last column of Tables I., II., and III.

The particular local impost from which expenditure is made must be taken in a general sense, *e.g.*, "Poor Rate" signifies not only the monies levied as such, but all sums paid in aid thereof, whether as Treasury subventions or otherwise. In the Urban Sanitary Receipts the total of the auxiliary sums exceeds the Rates themselves.

The page printed after the Rate or other Local Tax, indicates where the full and final Summary both of Receipt and Expenditure will be found in the Return. (No. 343, Session 1882.)

POOR RATE, pp. 38–39.

	£	£
Total Relief to the Poor	8,102,136	
Cost of Proceedings at Law (Parochial and Union)	29,644	
School Attendance Committee Expenses	55,575	
Payments on Account of the Registration Act, viz., Fees to Clergymen and Registrars, Outlay for Register Offices, Books and Forms	92,674	
Vaccination Fees	87,745	
Expenses allowed in respect of Parliamentary or Municipal Registration; and Cost of Jury Lists	98,281	
Payments under Parochial Assessments Act and Union Assessment Committee Acts	79,516	
Money Expended for all other Purposes	512,448	
Total	£	9,058,019

COUNTY RATE, pp. 54–57.

Police	1,070,985	
Prosecution and Conveyance of Prisoners	116,906	
Reformatories	48,955	
Lunatic Asylums:		
Maintenance of Lunatics	48,653	
Building, Repairs, and Establishment	321,986	
Shirehalls and Judges' Lodgings	55,781	
Militia Storehouses	9,696	
County Bridges	96,274	
Register of Electors	12,482	
Salaries of County Officers	308,033	
Loans; Principal and Interest Paid during the Year	386,624	
All other Charges	218,846	
Total	£	2,695,221*

* Contributions for the Maintenance of Main Roads, not included above were 88,430*l.*

MUNICIPAL BOROUGH RATE, pp. 78–79.

	£	£
Public Works, Maintenance and Repairs	808,696	
Cost of the Police	795,848	
Cost of Prosecutions	56,662	
Maintenance of Prisoners	12,706	
Lunatics; Cost of Maintaining those chargeable to the Borough	31,766	
Loans Repaid with Interest during the Year	710,920	
Salaries and Collectors' Poundage	268,100	
Sinking Fund	35,031	
All other Charges	748,665	
Total	£	3,468,394

METROPOLITAN BOARD OF WORKS, pp. 318–319.

Interest on various Loans	623,319	
Cost of Pumping Stations, Embankments, Fire Brigade, Parks	191,867	
Expenses under Acts of Parliament: Petroleum, Dangerous Structures, Gas, Cattle Plague, &c.	18,408	
Establishment, Law, Parliamentary Expenses, Printing, &c.	52,047	
Capital Expenditure:		
Improvements	1,560,672	
Contributions to Local Improvements	38,218	
Fire Brigade Stations and Plant	26,644	
Loans of 1879 and 1880, Stamp Duty and Expenses thereof	12,661	
Firemen's Saving Fund	308	
Loans:		
Repaid by the Board	436,533	
Advanced by the Board	878,250	
Advances for Expenses, &c.	2,335	
	3,841,262	
Less.—Coal and Wine Duties	176,850	
Total	£	3,664,412

HIGHWAY RATES, p. 315.—Also [C. 2890—1881.]

Repair of Main Roads	426,009	
Repairs of Ordinary Highways	1,232,929	
Repairs of existing Turnpike Roads	10,729	
Law Charges	3,258	
Improvements	26,651	
Interest on Loans	2,284	
Money Borrowed Repaid	4,180	
Salaries	104,655	
To Turnpike Trusts	13,188	
Other Payments	30,349	
Total	£	1,854,232

METROPOLITAN POLICE RATE, pp. 322–323.

	£	£
Office Expenses (including Salaries)	36,286	
Law Charges	794	
Pay, Clothing, and Equipment of Force	903,748	
Medical and Funeral Expenses	7,675	
Horses, Vans, Carts, &c.	14,789	
Police Stations and Section Houses	45,966	
Fuel and Light	22,084	
Miscellaneous Expenses	21,426	
Retired Allowances and Pensions	120,011	
Special Expenses	1,732	
Repayments	1,564	
Total	£	1,176,075

METROPOLITAN MANAGEMENT RATES, pp. 90–91.

In Making and Maintaining Roads, Streets, and Paths, and for Scavenging, and Watering the same	1,148,163	
For Lighting, and Works connected therewith	228,659	
For Sewerage and Drainage Works	124,927	
Loans Repaid with Interest during the Year; including Annuities	259,098	
Salaries and Collectors' Poundage	120,046	
All other Charges	292,413	
Total	£	2,173,306

CITY OF LONDON POLICE RATE, pp. 326–327.

Salaries	4,375	
Wages to Inspectors and Constables for 53 Weeks, including Boot Money	70,698	
Transfer to Superannuation Fund	8,934	
Clothing, Helmets, Caps, Lanterns, &c.	3,415	
Chief Office and Station Expenses	12,457	
Other Expenses	722	
Total	£	100,601

CITY OF LONDON WARD RATES, pp. 326–327.

Cash paid to Ward Deputies	5,615	
Total	£	5,615

BOROUGH URBAN SANITARY RATES, pp. 108–109.

	£	£
Public Works:		
Sewerage	525,556	
Water Supply	1,561,506	
Gas Supply	2,209,686	
Highways, Scavenging, and Watering	1,575,356	
Hospitals	46,892	
All other Public Works	1,790,322	
Private Improvement Works:		
Drainage and Water Supply	66,068	
All other Private Works	251,325	
Loans Repaid with Interest during the Year	4,783,862	
Salaries and Collectors' Poundage	382,220	
Payments to Sinking Fund	417,972	
All other Charges	1,215,502	
Total	£	14,826,267

PORT SANITARY RATES, pp. 200-201.

	£	£
Hospitals:		
Buildings	1,715	
Cost of Patients, exclusive of Buildings	1,077	
Cost of Removing Nuisances, and for Disinfecting Ships, &c.	40	
Salaries of Officers	3,135	
Repayments of Principal with Interest on Loans, and Sums (if any) invested in Sinking Fund	186	
Other Expenses	501	
Total	£	6,654

AUDITED URBAN SANITARY RATES, pp. 152–153.

	£	£
Public Works:		
Sewerage	108,908	
Water Supply	152,677	
Gas Supply	393,736	
Highways, Scavenging, and Watering	771,077	
All other Public Works	157,043	
Private Works:		
Improvements; Drainage and Water Supply	113,432	
General Expenditure:		
Salaries, less Parliamentary Grants; also Establishment Charges	292,527	
Repayment of Loans with Interest	839,808	
School Attendance Committee	4,625	
All other General Payments	191,803	
Total	£	3,025,636

LIGHTING AND WATCHING RATES, p. 212–213.

	£	£
Cost of Gas	28,298	
New Works and Repairs	2,539	
Salaries and Poundage	6,148	
All other Charges	1,128	
Total	£	38,113

SEWERS RATES, pp. 216–217.

Maintaining Ordinary Works, making New Works and Improvements	45,014	
Loans Repaid with Interest during the Year, including Annuities (if any)	7,415	
Salaries and Collectors' Poundage	9,569	
All other Charges	7,812	
Total	£	69,810

RURAL SANITARY RATES, pp. 196–197.

General Expenses:		
Salaries	125,426	
Hospitals, where not paid out of Loans	3,409	
Highways	65,864	
Other Expenses	24,768	
Special Expenses:		
Construction of Sewers, where not paid out of Loans	24,821	
Providing Water Supply, where not paid out of Loans	12,486	
Lighting	6,157	
Other Expenses	28,828	
Loans Repaid with Interest	66,628	
Payments (if any) to Sinking Fund	20	
Total	£	358,407
Monies paid out of Loans during the Year for—		
Works of Sewerage	155,475	
Works of Water Supply	88,930	
Hospitals, &c.	2,346	
Total	£	246,751
GRAND TOTAL	£	605,158

DRAINAGE AND EMBANKMENT RATES, pp. 230–231.

	£	£
Maintaining Ordinary Works, making New Works and Improvements	149,758	
Loans Repaid with Interest during the Year, including Annuities (if any)	135,899	
Salaries and Collector's Poundage	17,774	
All other Charges	41,447	
Total	£	344,878

BURIAL BOARD RATES, pp. 278–279.

Cost of Maintaining Old and Laying out New Burial Grounds	118,600	
Burial Fees Paid to Ministers and Incumbents	22,897	
Loans Repaid with Interest during the Year, including Annuities (if any)	153,354	
Salaries	53,415	
All other Charges	61,570	
Total	£	409,836

SCHOOL BOARD RATES, pp. 330–331.

Expenses of Administration:		
Election Expenses	16,564	
Salaries of Officers of the Board	160,028	
Repayments of Principal of Loans	127,325	
Interest on Loans	356,728	
Legal and other Expenses of Administration	75,592	
Expenses of Maintenance of Public Elementary Schools	1,727,744	
Expenses of Maintenance of Industrial Schools, and Contributions towards such Schools	69,354	
Capital Charges:		
Purchase of Land and Erection of School Buildings; Alterations and Additions to School Buildings	1,065,495	
Furnishing School Buildings	45,196	
Expenses not included under foregoing heads	7,045	
Total	£	3,651,071

BRIDGES AND FERRIES, pp. 298–299.

New Works and Improvements, Repairs, and Maintenance	41,688	
Loans Repaid with Interest during the Year, including Annuities (if any)	6,071	
Salaries and Collectors' Poundage	4,002	
All other Charges	3,860	
Total	£	55,621

CHURCH RATES, pp. 290–291.

	£	£
Loans Repaid with Interest - - -	7,927	
All other Charges - - - -	5,262	
Total - - -	£	13,189

HARBOURS, pp. 304–305.

Making New and Maintaining Old Works; Repairs - - - - -	661,202	
Lighting; Buoys and Beacons; Anchors, Chains, Cables, &c. - - - -	43,929	
Loans repaid with Interest - - -	1,848,975	
Rents, Rates, Taxes, and Insurance - -	47,168	
Salaries and Collectors' Poundage - -	54,451	
All other Charges - - - -	558,047	
Total - - -	£	3,213,862

CITY OF LONDON TOLLS, DUES, AND RENTS, pp. 334–337.

Full details of Expenditure, pp. 334 *et seq.* - - - - - -	—	
Total - - -	£	823,505

LIGHT DUES, pp. 348–349.

Maintenance of Lighthouses and Auxiliary Works, and Services paid by the Trinity House - - - - -	213,319	
New Works - - - - -	22,563	
Expended in respect of Fees - -	37,868	
Salaries and Expenses (included in Expenditure of Fees) - - - -	—	
Life Boats - - - -	17,054	
Exchequer Bills bought - - -	56,500	
Other Expenses - - - -	1,122	
Total - - -	£	348,426

TURNPIKE TRUSTS, pp. 344–345.

Full details of Expenditure at page 3 of [C.—2966.] Session 1881 - - -	—	
Total - - -	£	271,880

PILOTAGE, p. 356.

Paid to Pilots - - - -	385,752	
Other Charges - - - - -	4,796	
Total - - -	£	400,548

MARKET AND FAIR TOLLS, pp. 294–295.

	£	£
New Works, Improvements, and Repairs; Cleansing - - - - -	9,637	
Loans Repaid with Interest during the Year, including Annuities (if any) - -	4,353	
Salaries and Collectors' Poundage - -	2,694	
All other charges - - - -	4,821	
Total - - - £		21,505

DUTIES LEVIED BY THE CITY OF LONDON, pp. 354–355.

Details shown at the above-mentioned pages -	—	
Total - - - £		515,791*

* After deducting the drawback on coals.

Local Government Board,
Whitehall,
7th August 1882.

FREDERICK PURDY,
Principal of the Statistical Department.

NOTE.—The pages referred to above are those of the Parliamentary Blue Book of Local Taxation Returns, 1880–81.

No. 101.

SUMMARY STATEMENT of the COUNTY RATES of ENGLAND during the Year 1880–81.

COMPARED with the County Treasurers' Accounts for the Year ended with Lady-day 1880, the present Summary shows a decrease of 1·2 per cent. in Receipts and an increase of 3·4 per cent. in Expenditure.

	Year ended with Lady-day		Difference in 1881.	
	1880.	1881.	More.	Less.
Valuation for:	£	£	£	£
County Rates - -	117,322,980	119,056,839	1,733,859	—
Police Rates - - -	75,407,944	75,755,858	347,914	—
RECEIPT.				
Local Taxation:				
County Rates - -	1,108,965	1,188,514	79,549	—
Police Rates - - -	558,846	556,723	—	2,123
Imperial Taxation:				
Grants for the Police - -	412,163	412,974	811	—
Grants for Prosecutions and Prisoners - - -	121,058	116,875	—	4,183
Grants for County Lunatics -	17,225	18,894	1,669	—
TOTAL of LOCAL and IMPERIAL TAXATION -	2,218,257	2,293,980	75,723	—
On account of Lunatic Asylums -	21,624	7,220	—	14,404
On account of Prisoners - -	14,517	—	—	14,517
Loans effected during the Year -	260,018	307,628	47,610	—
Fines and Penalties - -	—	36,567	—	132,087
Other Receipts - - -	525,319	356,665		
TOTAL RECEIPT - £	3,039,735	3,002,060	—	37,675
EXPENDITURE.				
Police - - -	1,087,857	1,070,985	—	16,872
Prosecutions and Conveyance of Prisoners - - -	128,206	116,906	—	11,300
Reformatories - - -	61,768	48,955	—	12,813
Lunatic Asylums - -	358,572	370,639	12,067	—
Main Roads: Contributions towards	—	288,430	288,430	—
Salaries of County Officers -	297,771	308,033	10,262	—
Loans repaid with Interest -	452,293	386,624	—	65,669
All other Expenses - -	500,132	393,079	—	107,053
TOTAL EXPENDITURE - £	2,886,599	2,983,651	97,052	—

The average rate in the £. for County Rate in all England was $2\frac{3}{8}d.$ for the year 1880-81, and for Police Rate $1\frac{3}{4}d.$

The Loans raised on the security of the rates and outstanding against the County Authorities at Lady-day 1881, amounted to 2,995,311*l.*

Local Government Board,
Whitehall,
6th March 1882.

FREDERICK PURDY,
Principal of the Statistical Department.

No. 102.

TABLE showing the AMOUNT PAID to each UNION and PARISH under a BOARD OF GUARDIANS, and to each SCHOOL and SICK ASYLUM DISTRICT, in ENGLAND AND WALES, out of GRANTS made by PARLIAMENT; (1) SALARIES of POOR LAW MEDICAL OFFICERS, and SCHOOLMASTERS, and SCHOOLMISTRESSES, (2) COST of MAINTENANCE of PAUPER LUNATICS, (3) SALARIES of MEDICAL OFFICERS OF HEALTH and INSPECTORS OF NUISANCES for RURAL SANITARY DISTRICTS, (4) ADDITIONAL FEES to REGISTRARS OF BIRTHS AND DEATHS; also the AMOUNT paid to URBAN SANITARY AUTHORITIES for SALARIES of MEDICAL OFFICERS OF HEALTH and INSPECTORS OF NUISANCES, and to COUNTIES and BOROUGHS for MAINTENANCE of LUNATICS for the Year ended at LADY-DAY, 1882.

No.	UNION OR PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
	BEDFORD.					
1	Ampthill	231 10 0	309 12 0	61 5 0	13 10 0	615 17 0
2	Bedford	331 16 11	870 2 0	205 0 0	31 10 0	1,438 8 11
3	Biggleswade	294 8 0	534 14 0	185 0 0	9 0 0	1,023 2 0
4	Leighton Buzzard	166 11 0	395 8 0	65 0 0	17 18 6	644 17 6
5	Luton	282 7 7	932 8 0	60 0 0	9 0 0	1,283 15 7
6	Woburn	161 8 0	176 18 0	50 0 0	9 0 0	397 6 0
	BERKS.					
7	Abingdon	381 0 0	456 0 0	110 2 9	22 10 0	969 12 9
8	Bradfield	232 9 11	467 12 0	54 10 0	13 10 0	768 1 11
9	Cookham	219 7 6	403 4 0	46 0 0	9 0 0	677 11 6
10	East Hampstead	82 10 0	156 12 0	21 0 0	10 0 0	269 2 0
11	Faringdon	204 15 6	452 16 0	..	13 10 0	671 1 6
12	Hungerford	242 8 11	329 12 0	118 10 0	13 10 0	704 0 11
13	Newbury	268 6 8	808 10 0	83 0 0	13 10 0	1,173 6 8
14	Reading	268 7 1	838 2 0	22 10 0	13 10 0	1,142 9 1
15	Wallingford	240 10 1	470 10 0	89 10 0	9 0 0	809 10 1
16	Wantage	194 1 3	278 16 0	57 10 0	13 10 0	543 17 3
17	Windsor	145 0 0	621 4 0	128 10 0	9 0 0	903 14 0
18	Wokingham	149 16 6	458 8 0	90 0 0	9 0 0	707 4 6
	BUCKS.					
19	Amersham	280 17 0	493 0 0	93 2 4	22 10 0	889 9 4
20	Aylesbury	272 18 8	609 4 0	125 0 0	18 0 0	1,025 2 8
21	Buckingham	227 10 0	278 12 0	61 5 0	13 10 0	580 17 0
22	Eton	233 6 0	633 4 0	102 10 0	13 10 0	982 10 0
23	Newport Pagnell	197 10 0	673 8 0	126 11 5	13 10 0	1,010 19 5
24	Winslow	146 1 7	212 16 0	48 10 0	4 10 0	411 17 7
25	Wycombe	374 8 4	846 2 0	92 10 0	22 10 0	1,335 10 4
	CAMBRIDGE.					
26	Cambridge	197 6 11	707 6 0	..	18 0 0	922 12 11
27	Caxton and Arrington	213 18 8	141 12 0	59 0 0	4 10 0	419 0 8
28	Chesterton	279 8 0	421 10 0	55 0 0	13 10 0	769 8 0
29	Ely	175 12 6	355 4 0	..	18 0 0	548 16 6
30	Linton	153 10 0	216 18 0	86 0 0	13 10 0	469 18 0
31	Newmarket	243 8 11	492 14 0	164 10 4	22 10 0	923 3 3
32	North Witchford	186 4 0	378 14 0	35 0 0	9 0 0	608 18 0
33	Whittlesey	75 0 0	131 0 0	30 0 0	4 10 0	240 10 0
34	Wisbeach	343 17 10	505 0 0	..	27 0 0	875 17 10
	CHESTER.					
35	Altrincham	286 1 4	711 14 0	244 10 0	18 0 0	1,260 5 4
35a	Birkenhead	608 1 9	1,810 10 0	10 0 0	13 10 0	2,442 1 9
36	Tarvin	96 12 0	149 0 0	63 0 0	4 10 0	313 2 0
37	Chester	237 1 8	1,114 10 0	55 10 0	9 0 0	1,416 1 8
38	Congleton	228 11 7	421 6 0	112 0 0	13 10 0	775 7 7
39	Macclesfield	328 16 3	935 2 0	150 0 0	36 0 0	1,449 18 3
40	Nantwich	245 16 8	722 6 0	228 0 0	18 0 0	1,214 2 8
41	Northwich	223 17 0	532 0 0	182 0 0	18 0 0	955 17 0
42	Runcorn	206 9 0	302 4 0	130 0 0	18 0 0	656 13 0
43	Stockport	248 16 7	1,507 18 0	74 13 7	31 10 0	1,862 18 2
44	Wirral	125 6 0	226 6 0	182 0 0	13 10 0	547 2 0

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION OR PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
	CORNWALL.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
45	Austell, St.	165 0 8	589 18 0	85 0 0	18 0 0	857 18 8
46	Bodmin	212 13 9	425 4 0	45 17 6	18 0 0	701 15 3
47	Camelford	67 10 0	80 12 0	25 0 0	9 0 0	182 2 0
48	Columb Major, St.	135 0 6	239 0 0	25 0 0	13 10 0	412 10 6
49	Falmouth	120 1 0	390 4 0	62 18 4	18 0 0	591 3 4
50	Germans, St.	112 16 0	284 4 0	14 7 0	13 10 0	424 17 0
51	Helston	132 0 0	432 0 0	..	22 10 0	586 10 0
52	Launceston	108 0 0	197 10 0	17 10 0	22 2 6	345 2 6
53	Liskeard	188 9 2	609 12 0	48 15 0	18 0 0	864 16 2
54	Penzance	114 0 0	553 10 0	92 1 8	27 0 0	786 11 8
55	Redruth	195 9 0	612 18 0	64 0 0	22 10 0	894 17 0
56	Stratton	101 7 0	164 8 0	32 10 0	13 10 0	311 15 0
57	Truro	273 15 0	699 8 0	82 14 0	27 0 0	1,082 17 0
	CUMBERLAND.					
58	Alstone with Garrigill	11 0 0	62 18 0	30 0 0	4 10 0	108 8 0
59	Bootle	55 0 0	75 0 0	20 0 0	9 0 0	159 0 0
60	Brampton	25 0 0	123 16 0	50 0 0	13 1 0	211 17 0
61	Carlisle	253 15 0	892 8 0	90 0 0	25 17 6	1,262 0 6
62	Cockermouth	166 17 0	459 0 0	125 7 8	18 0 0	769 4 8
63	Longtown	50 0 0	119 14 0	69 7 6	9 0 0	248 1 6
64	Penrith	75 19 1	457 12 0	107 10 0	13 10 0	654 11 1
65	Whitehaven	241 6 2	679 2 0	135 11 0	18 0 0	1,073 19 2
66	Wigton	81 6 0	430 12 0	77 10 0	13 10 0	602 18 0
	DERBY.					
67	Ashbourne	116 13 0	253 10 0	90 0 0	26 8 0	486 11 0
68	Bakewell	159 2 0	407 10 0	122 15 0	13 10 0	702 17 0
69	Belper	218 18 0	736 8 0	225 0 0	27 0 0	1,207 6 0
70	Chapel-en-le-Frith	65 0 0	120 18 0	90 0 0	9 0 0	284 18 0
71	Chesterfield	246 6 9	963 18 0	275 0 0	22 10 0	1,507 14 9
72	Derby	494 11 4	1,575 8 0	..	1 10 0	2,071 9 4
73	Glossop	43 0 0	130 0 0	14 7 6	4 10 0	191 17 6
74	Hayfield	45 0 0	95 0 0	20 0 0	4 10 0	164 10 0
75	Shardlow	191 17 0	497 8 0	150 0 0	22 10 0	861 15 0
	DEVON.					
76	Axminster	257 9 7	335 10 0	..	18 0 0	610 19 7
77	Barnstaple	361 13 1	600 18 0	50 0 0	27 0 0	1,039 11 1
78	Bideford	151 15 6	276 2 0	67 10 0	19 16 0	515 3 6
79	Crediton	204 18 2	319 12 0	47 10 0	18 0 0	589 0 2
80	East Stonehouse	47 2 0	177 4 0	..	4 10 0	228 16 0
81	Exeter	205 0 0	915 18 0	..	9 0 0	1,129 18 0
82	Holsworthy	79 5 8	134 10 0	35 0 0	20 0 6	268 16 2
83	Honiton	323 16 0	506 12 0	25 0 0	9 0 0	864 8 0
84	Kingsbridge	217 1 10	254 4 0	..	22 10 0	493 15 10
85	Newton Abbot	449 11 4	1,120 18 0	212 10 0	27 0 0	1,809 19 4
86	Okehampton	188 7 6	286 6 0	25 0 0	22 10 0	522 3 6
87	Plymouth	316 9 0	975 2 0	..	9 0 0	1,300 11 0
88	Plympton St. Mary	208 4 0	460 4 0	35 0 0	9 0 0	712 8 0
89	South Molton	228 10 0	366 4 0	67 10 0	13 10 0	675 14 0
90	Stoke Damerel	237 0 4	659 16 0	..	18 0 0	914 16 4
91	Tavistock	205 4 3	471 2 0	45 0 0	18 0 0	739 6 3
92	Thomas, St.	505 1 5	1,177 18 0	..	43 5 6	1,726 4 11
93	Tiverton	297 17 6	625 0 0	..	27 0 0	949 17 6
94	Torrington	170 7 0	283 8 0	57 10 0	21 19 6	533 4 6
95	Totnes	265 8 0	555 4 0	67 10 0	31 10 0	919 12 0
	DORSETSHIRE.					
96	Beaminster	215 19 0	424 4 0	70 0 0	13 10 0	723 13 0
97	Blandford	250 10 0	428 0 0	70 0 0	9 0 0	757 10 0
98	Bridport	162 0 0	310 16 0	..	13 10 0	486 6 0
99	Cerne	82 10 0	189 8 0	55 0 0	4 10 0	331 8 0
100	Dorchester	243 3 3	485 14 0	100 0 0	13 10 0	842 7 3
101	Poole	180 18 0	223 12 6	18 15 0	13 10 0	436 15 0
102	Shaftesbury	187 12 6	289 16 0	55 0 0	13 10 0	545 18 6
103	Sherborne	181 5 0	325 8 0	60 0 0	13 10 0	580 3 0
104	Sturminster	141 10 0	182 16 0	50 0 0	9 0 0	383 6 0
105	Wareham and Purbeck	213 18 6	512 4 0	50 0 0	18 0 0	794 2 6
106	Weymouth	283 16 8	499 12 0	70 0 0	18 0 0	871 8 8
107	Wimborne and Cranborne	204 10 7	418 14 0	65 0 0	13 10 0	701 14 7

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION OR PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
	DURHAM.					
108	Auckland	206 13 4	716 8 0	145 0 0	9 0 0	1,077 1 4
109	Chester-le-Street	54 2 9	196 8 0	151 14 10	9 0 0	411 5 7
110	Darlington	143 0 0	653 14 0	116 6 10	9 0 0	922 0 10
111	Durham	177 12 9	619 8 0	195 6 0	9 0 0	1,001 6 9
112	Easington	80 0 0	490 8 0	96 13 4	4 10 0	671 11 4
113	Gateshead	346 14 1	1,318 6 0	..	18 0 0	1,683 0 1
113*a*	Hartlepool	137 10 0	396 12 0	35 0 0	4 10 0	573 12 0
114	Houghton-le-Spring	65 0 0	488 8 0	150 0 0	9 0 0	712 8 0
115	Lanchester	75 0 0	389 16 0	75 0 0	9 0 0	548 16 0
116	Sedgefield	35 0 0	217 6 0	125 0 0	4 10 0	381 16 0
117	South Shields	277 4 0	1,065 0 0	..	9 0 0	1,351 4 0
118	Stockton	246 0 0	355 4 0	145 16 8	4 10 0	751 10 8
119	Sunderland	531 5 1	1,880 6 0	60 0 0	22 10 0	2,494 1 1
120	Teesdale	78 6 6	333 6 0	55 0 0	13 10 0	480 2 6
121	Weardale	56 0 0	195 14 0	55 0 0	13 10 0	320 4 0
	ESSEX.					
122	Billericay	217 10 0	304 10 0	93 10 0	12 16 6	628 6 6
123	Braintree	365 19 10	625 12 0	76 3 7	26 14 0	1,094 9 5
124	Chelmsford	482 7 0	680 8 0	282 10 0	22 10 0	1,467 15 0
125	Colchester	250 12 3	615 18 0	..	13 10 0	880 0 3
126	Dunmow	373 9 1	405 0 0	..	18 0 0	796 9 1
127	Epping	251 17 6	399 16 0	140 0 0	13 10 0	805 3 6
128	Halstead	166 5 4	372 18 0	77 2 0	9 0 0	625 5 4
129	Lexden and Winstree	308 5 0	455 2 0	162 10 0	22 10 0	948 7 0
130	Maldon	366 3 0	658 2 0	222 10 0	22 10 0	1,269 5 0
131	Ongar	219 17 0	208 4 0	17 10 0	9 0 0	454 11 0
132	Orsett	159 11 6	277 4 0	60 0 0	9 0 0	505 15 6
133	Rochford	183 14 5	324 10 0	50 0 0	18 0 0	576 4 5
134	Romford	243 0 0	721 2 0	175 0 0	18 0 0	1,157 2 0
135	Saffron Walden	221 10 0	482 0 0	105 0 0	13 10 0	822 0 0
136	Tendring	301 1 0	570 0 0	175 0 0	18 0 0	1,064 1 0
137	West Ham	1,062 1 4	2,120 16 0	..	12 0 0	3,194 17 4
	GLOUCESTERSHIRE.					
139	Bristol	626 3 0	1,229 2 0	..	22 10 0	1,877 15 0
140	Cheltenham	393 8 9	895 16 0	67 10 0	9 0 0	1,365 14 9
141	Chipping Sodbury	138 14 10	290 2 0	91 5 0	18 0 0	538 1 10
142	Cirencester	256 5 1	520 4 0	56 10 0	13 10 0	846 9 1
143	Barton Regis	647 11 10	2,329 8 0	135 0 0	27 0 0	3,138 19 10
144	Dursley	145 18 4	267 6 0	72 10 0	13 10 0	499 4 4
145	Gloucester	214 12 2	648 18 0	85 10 0	18 0 0	967 0 2
146	Newent	150 2 1	206 2 0	56 19 9	9 0 0	422 3 10
147	Northleach	153 15 1	174 10 0	62 2 0	9 0 0	399 7 1
148	Stow-on-the-Wold	82 4 6	256 6 0	42 10 0	9 0 0	390 0 6
149	Stroud	313 1 0	958 2 0	80 0 0	31 10 0	1,382 13 0
150	Tetbury	74 16 3	110 12 0	35 17 6	7 10 0	228 15 9
151	Tewkesbury	131 6 9	202 8 0	40 0 0	9 0 0	382 14 9
152	Thornbury	151 5 10	287 12 0	124 10 0	13 10 0	576 17 10
153	Westbury-on-Severn	265 5 3	283 16 0	114 0 0	9 0 0	672 1 3
154	Wheatenhurst	71 15 6	106 6 0	62 10 0	8 12 6	249 4 0
155	Winchcomb	79 10 9	146 4 0	35 0 0	9 0 0	269 14 9
	HEREFORD.					
156	Bromyard	164 7 9	320 8 0	77 10 0	13 10 0	575 15 9
157	Dore	138 18 0	204 2 0	45 10 0	13 10 0	402 0 0
158	Hereford	438 0 0	873 0 0	110 0 0	18 0 0	1,439 0 0
159	Kington	135 0 0	344 16 0	17 0 1	15 19 6	512 15 7
160	Ledbury	229 10 6	301 8 0	107 10 0	9 0 0	647 8 6
161	Leominster	135 0 0	515 0 0	77 10 0	13 10 0	741 0 0
162	Ross	274 11 5	370 16 0	60 0 0	13 10 0	718 17 5
163	Weobley	136 17 1	152 4 0	57 10 0	9 0 0	355 11 1

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION OR PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
	HERTS.					
164	Alban's, St.	185 3 0	500 10 0	95 0 0	9 0 0	789 13 0
165	Barnet	199 15 0	396 14 0	93 10 0	13 10 0	703 9 0
166	Berkhampstead	110 0 0	136 8 0	73 0 0	9 0 0	328 8 0
167	Bishop's Stortford	389 5 4	563 16 0	149 10 0	18 0 0	1,120 11 4
168	Buntingford	90 0 0	89 2 0	58 0 0	4 10 0	241 12 0
169	Hatfield	40 15 0	176 2 0	60 0 0	4 10 0	281 7 0
170	Hemel Hempstead	167 10 0	237 0 0	74 0 0	13 10 0	492 0 0
171	Hertford	168 16 6	362 4 0	71 0 0	9 0 0	611 0 6
172	Hitchin	220 12 9	536 16 0	75 0 0	9 0 0	841 8 9
173	Royston	207 12 0	454 8 0	90 0 0	9 0 0	761 0 0
174	Ware	248 12 0	307 6 0	114 10 0	18 0 0	688 8 0
175	Watford	266 3 0	507 0 0	162 0 0	18 0 0	953 3 0
176	Welwyn	25 0 0	60 0 0	18 10 0	4 10 0	108 0 0
	HUNTS.					
177	Huntingdon	248 0 0	420 8 0	59 0 0	18 0 0	745 8 0
178	Ives, St.	177 12 0	361 10 0	100 0 0	18 0 0	657 2 0
179	Neots, St.	133 5 0	363 18 0	135 10 0	9 0 0	641 13 0
	KENT.					
180	Ashford, East	207 1 0	170 10 0	105 0 0	13 10 0	496 1 0
181	Ashford, West	181 15 0	301 6 0	78 10 0	9 0 0	570 11 0
182	Blean	187 4 8	274 2 0	98 0 0	13 10 0	572 16 8
183	Bridge	150 14 7	255 4 0	76 10 0	9 0 0	491 8 7
184	Bromley	237 8 8	702 14 0	123 10 0	9 0 0	1,072 12 8
184*a*	Canterbury	63 3 7	330 4 0	..	4 10 0	397 17 7
185	Cranbrook	215 13 4	392 6 0	76 10 0	9 0 0	693 9 4
186	Dartford	220 0 0	748 0 0	..	13 10 0	981 10 0
187	Dover	309 4 10	883 16 0	50 0 0	13 10 0	1,256 10 10
188	Eastry	247 6 3	853 10 0	98 0 0	17 3 6	1,215 19 9
189	Elham	202 7 2	684 2 0	81 0 0	13 10 0	980 19 2
190	Faversham	271 5 0	275 12 0	134 6 9	13 10 0	694 13 9
191	Gravesend and Milton	138 2 10	407 16 0	..	4 10 0	550 8 10
192	Greenwich	894 11 10	2,684 6 0	..	18 0 0	3,596 17 10
193	Hollingbourn	203 17 0	256 0 0	20 16 8	13 10 0	494 3 8
194	Hoo	50 0 0	95 2 0	..	4 10 0	149 12 0
195	Lewisham	284 6 3	667 2 0	19 10 0	18 0 0	988 18 3
196	Maidstone	431 11 5	994 12 0	92 0 0	22 10 0	1,540 13 5
197	Malling	241 19 1	495 14 0	84 7 1	13 10 0	835 10 2
198	Medway	321 2 9	862 4 0	10 0 0	9 0 0	1,202 6 9
199	Milton	184 1 8	434 10 0	62 10 0	4 10 0	685 11 8
200	North Aylesford	208 18 0	382 14 0	85 0 0	9 0 0	685 12 0
201	Romney Marsh	130 0 0	99 14 0	20 0 0	9 0 0	258 14 0
202	Sevenoaks	318 8 4	492 4 0	110 0 0	13 10 0	934 2 4
203	Sheppey	169 6 0	383 0 0	10 0 0	9 0 0	571 6 0
204	Tenterden	148 17 6	299 18 0	52 0 0	9 0 0	509 15 6
205	Thanet, Isle of	298 0 0	1,117 0 0	67 19 1	13 10 0	1,496 9 1
206	Tonbridge	425 1 2	1,101 0 0	119 0 0	13 10 0	1,658 11 2
206*a*	Woolwich	643 1 11	1,585 2 0	..	22 10 0	2,250 13 11
	LANCASTER.					
207	Ashton-under-Lyne	278 0 5	1,251 4 0	90 0 0	40 10 0	1,659 14 5
207*a*	Barrow-in-Furness	69 13 9	192 16 0	..	4 10 0	266 19 9
207*b*	Barton-upon-Irwell	165 10 0	402 2 0	120 0 0	13 10 0	701 2 0
208	Blackburn	548 9 0	897 4 0	52 10 0	31 10 0	1,529 13 0
209	Bolton	512 0 6	1,687 14 0	110 0 0	58 10 0	2,368 4 6
210	Burnley	162 10 0	1,457 4 0	..	16 19 0	1,636 13 0
211	Bury	320 8 9	664 4 0	162 10 0	45 0 0	1,192 2 9
212	Chorley	141 8 11	485 10 0	150 0 0	22 10 0	799 8 11
213	Chorlton	1,257 14 10	2,837 14 0	..	18 0 0	4,113 8 10
214	Clitheroe	63 0 0	343 0 0	62 10 0	21 9 0	489 19 0
215	Fylde, The	141 7 10	277 16 0	74 0 4	13 10 0	506 14 2
216	Garstang	72 10 0	64 6 0	45 0 0	13 10 0	195 6 0
217	Haslingden	230 0 0	709 4 0	95 0 0	22 10 0	1,056 14 0
218	Lancaster	82 10 0	279 0 0	120 0 0	18 0 0	499 10 0
219	Leigh	167 16 11	495 12 0	125 0 0	18 0 0	806 8 11
220	Liverpool	3,141 14 2	6,402 10 0	..	31 10 0	9,575 14 2
220*a*	Lunesdale	76 0 0	71 4 0	..	13 14 6	160 18 6
221	Manchester	2,100 5 6	2,182 12 0	..	16 10 0	4,299 7 6
222	Oldham	390 17 6	942 16 0	..	27 0 0	1,360 13 6
223	Ormskirk	234 11 8	645 18 0	127 2 9	40 10 0	1,048 2 5

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION OR PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
	LANCASTER—*cont.*	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
224	Prescot	285 16 7	1,365 14 0	120 0 0	31 10 0	1,803 0 7
225	Preston	752 4 7	1,717 16 0	66 10 8	31 10 0	2,568 1 3
225*a*	Prestwich	185 0 0	863 6 0	105 0 0	22 10 0	1,175 16 0
226	Rochdale	227 3 7	1,136 8 0	..	45 0 0	1,408 11 7
227	Salford	824 18 9	1,327 12 0	..	18 0 0	2,170 10 9
228	Todmorden	27 0 0	317 18 0	43 0 0	9 0 0	396 18 0
228*a*	Toxteth Park	568 14 5	1,337 4 0	..	4 10 0	1,910 8 5
229	Ulverstone	158 12 9	697 4 0	151 10 0	27 0 0	1,034 6 9
230	Warrington	537 4 2	790 6 0	80 0 0	26 8 0	1,433 18 2
231	West Derby	1,841 7 3	6,208 14 0	32 10 0	36 0 0	8,118 11 3
232	Wigan	462 16 0	1,200 8 0	64 0 0	31 10 0	1,758 14 0
	LEICESTER.					
234	Ashby-de-la-Zouch	152 2 3	446 12 0	100 0 0	18 0 0	716 14 3
235	Barrow-on-Soar	132 10 0	514 10 0	..	6 0 0	653 0 0
236	Billesdon	95 0 0	110 18 0	54 0 6	4 10 0	264 8 6
237	Blaby	100 0 0	329 8 0	100 1 0	9 0 0	538 9 0
238	Hinckley	130 15 6	386 16 0	40 15 0	13 10 0	571 16 6
239	Leicester	504 5 8	2,855 2 0	..	9 0 0	3,368 7 8
240	Loughborough	152 19 0	624 8 0	110 0 0	9 0 0	896 7 0
241	Lutterworth	176 0 0	410 16 0	79 10 6	4 10 0	670 16 6
242	Market Bosworth	133 0 10	267 12 0	83 4 6	9 0 0	492 17 4
243	Market Harborough	233 12 4	326 4 0	69 15 9	4 10 0	634 2 1
244	Melton Mowbray	170 12 11	284 14 0	..	18 0 0	473 6 11
	LINCOLN.					
245	Boston	367 7 9	534 6 0	165 0 0	22 10 0	1,089 3 9
246	Bourn	158 17 0	328 12 0	112 10 0	18 0 0	617 19 0
247	Caistor	291 18 0	544 14 0	128 0 0	13 10 0	978 2 0
248	Gainsborough	237 11 0	385 6 0	40 0 0	26 6 6	689 3 6
249	Glanford Brigg	268 2 9	496 14 0	125 0 0	13 10 0	903 6 9
250	Grantham	214 2 0	634 8 0	152 10 0	13 10 0	1,014 10 0
251	Holbeach	167 17 0	365 10 0	..	13 10 0	546 17 0
252	Horncastle	192 8 7	242 8 0	171 1 2	18 0 0	623 17 9
253	Lincoln	270 15 0	1,196 12 0	145 0 0	13 10 0	1,625 17 0
254	Louth	284 12 9	393 16 0	302 10 0	22 10 0	1,003 8 9
255	Sleaford	157 4 0	288 16 0	183 10 0	22 10 0	652 0 0
256	Spalding	248 6 4	268 8 0	..	24 16 6	541 10 10
257	Spilsby	205 2 0	399 16 0	190 0 0	22 10 0	817 8 0
258	Stamford	157 15 0	247 18 0	97 0 0	9 0 0	511 13 0
	MIDDLESEX.					
259	Bethnal Green	1,438 13 11	4,021 18 0	..	18 0 0	5,478 11 11
260	Brentford	430 14 3	1,770 8 0	..	22 10 0	2,223 12 3
261	Chelsea	750 7 10	1,721 16 0	..	13 10 0	2,485 13 10
263	Edmonton	773 4 0	2,143 0 0	..	27 0 0	2,943 4 0
264	Fulham	835 6 5	1,140 0 0	..	13 10 0	1,488 16 5
265	George, St., East	1,085 3 2	1,003 16 0	..	13 10 0	2,102 9 2
266	George, St.	1,000 17 6	3,564 6 0	..	22 10 0	4,587 13 6
267	Giles, St., and St. George, Bloomsbury	241 10 1	969 0 0	..	13 10 0	1,224 0 1
268	Hackney	975 15 4	2,926 14 0	..	22 10 0	3,924 19 4
268*a*	Hampstead	194 0 6	528 8 0	..	4 10 0	726 18 6
269	Hendon	409 2 0	637 2 0	162 10 0	18 0 0	1,226 14 0
270	Holborn	2,191 18 6	5,833 8 0	..	49 10 0	8,074 16 6
271	Islington	1,621 19 4	4,181 18 0	..	9 0 0	5,812 17 4
272	Westminster	562 7 0	1,193 12 0	..	13 10 0	1,769 9 0
273	Kensington	896 3 9	2,407 10 0	..	9 0 0	3,312 13 9
274	London, City	1,136 7 3	3,473 8 0	..	30 0 0	4,639 15 3
280	Marylebone	2,177 2 7	3,564 0 0	..	27 0 0	5,768 2 7
280*a*	Mile End Old Town	960 2 0	1,257 6 0	..	9 0 0	2,226 8 0
281	Paddington	384 9 10	1,828 12 0	..	9 0 0	2,222 1 10
282	Pancras, St.	1,676 12 3	4,247 2 0	..	27 0 0	5,950 14 3
282*a*	Poplar	707 1 0	2,208 10 0	..	13 10 0	2,929 1 0
282*b*	Shoreditch	798 17 10	3,680 12 0	..	22 10 0	4,501 19 10
282*c*	Staines	278 15 9	300 12 0	87 10 0	9 0 0	675 17 9
282*d*	Stepney	444 11 11	1,175 6 0	..	13 10 0	1,633 7 11
282*e*	Strand	947 10 1	1,117 14 0	..	13 10 0	2,078 14 1
282*f*	Uxbridge	216 8 0	716 8 0	140 0 0	13 10 0	1,086 6 0
282*g*	Whitechapel	729 8 10	2,321 8 0	..	27 0 0	3,078 6 10

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION or PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
	MONMOUTH.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
283	Abergavenny	107 0 0	705 2 0	37 10 0	17 0 6	866 12 6
283*a*	Bedwellty	133 7 4	1,124 12 0	60 0 0	13 10 0	1,331 9 4
284	Chepstow	126 10 0	375 0 0	116 10 0	13 10 0	631 10 0
285	Monmouth	162 12 0	719 0 0	97 10 0	18 0 0	997 2 0
286	Newport	559 13 0	1,324 0 0	138 0 0	18 0 0	2,039 13 0
287	Pontypool	141 10 0	709 6 0	45 0 0	13 10 0	909 6 0
	NORFOLK.					
288	Aylsham	210 5 0	399 4 0	92 10 0	9 0 0	710 19 0
289	Blofield	114 17 0	285 14 0	50 0 0	9 0 0	459 11 0
290	Depwade	261 10 0	520 6 0	70 0 0	18 0 0	869 16 0
291	Docking	148 4 9	255 2 0	90 0 0	13 10 0	506 16 9
292	Downham	169 6 10	436 6 0	77 10 0	13 10 0	696 12 10
293	Erpingham	258 10 0	375 16 0	75 0 0	13 10 0	722 16 0
294	Faith, St.	120 17 0	253 2 0	55 0 0	9 0 0	437 19 0
295	Flegg, East and West	62 2 0	92 6 0	51 5 0	9 0 0	214 13 0
296	Forehoe	135 8 0	245 16 0	69 10 0	9 0 0	459 14 0
297	Freebridge Lynn	140 5 5	236 2 0	40 0 0	16 19 0	433 6 5
298	Guiltcross	127 10 0	246 18 0	31 5 0	9 0 0	414 13 0
299	Henstead	126 8 0	142 12 0	70 0 0	9 0 0	348 0 0
300	King's Lynn	134 10 0	347 2 0	12 10 0	6 0 0	500 2 0
301	Loddon and Clavering	170 7 11	431 4 0	60 0 0	13 10 0	675 1 11
302	Mitford and Launditch	263 12 11	536 18 0	115 0 0	27 0 0	932 10 11
303	Norwich	536 8 5	1,783 14 0	..	22 10 0	2,342 12 5
304	Swaffham	215 0 0	360 18 0	51 12 8	4 10 0	632 0 8
305	Thetford	202 14 0	298 2 0	..	9 0 0	509 16 0
306	Smallburgh	162 9 0	182 10 0	65 0 0	18 0 0	427 19 0
307	Walsingham	184 13 0	463 16 0	70 0 0	13 10 0	731 19 0
308	Wayland	137 4 2	304 12 0	35 0 0	9 0 0	485 16 2
309	Yarmouth, Great	182 14 4	363 0 0	..	9 0 0	554 14 4
	NORTHAMPTON.					
310	Brackley	150 6 0	189 16 0	17 7 4	9 0 0	366 9 4
311	Brixworth	181 2 0	212 0 0	45 0 0	13 10 0	451 12 0
312	Daventry	177 0 0	368 4 0	70 13 6	13 10 0	629 7 6
313	Hardingstone	97 6 0	104 8 0	62 14 8	13 10 0	277 18 8
314	Kettering	179 15 0	281 2 0	60 0 0	13 10 0	534 7 0
315	Northampton	209 0 0	1,004 10 0	22 10 0	13 10 0	1,249 10 0
316	Oundle	185 10 0	244 18 0	75 10 0	13 10 0	519 8 0
317	Peterborough	249 6 2	765 10 0	80 0 0	18 0 0	1,112 16 2
318	Potterspury	122 6 0	237 12 0	30 0 0	4 10 0	394 8 0
319	Thrapston	148 9 0	308 4 0	38 10 0	9 0 0	504 3 0
320	Towcester	166 10 6	234 16 0	37 10 0	9 0 0	447 16 6
321	Wellingborough	163 6 0	661 14 0	69 15 10	13 10 0	908 5 10
	NORTHUMBERLAND.					
322	Alnwick	126 10 0	587 16 0	90 0 0	13 10 0	827 16 0
323	Belford	25 0 0	71 0 0	45 0 0	4 10 0	145 10 0
324	Bellingham	56 15 0	56 4 0	10 0 0	9 0 0	131 19 0
325	Berwick-on-Tweed	106 17 0	303 14 0	60 0 0	10 10 0	481 1 0
326	Castle Ward	97 11 10	301 2 0	80 0 0	9 0 0	487 13 10
327	Glendale	47 10 0	213 16 0	66 5 0	9 0 0	336 11 0
328	Haltwhistle	31 10 0	67 2 0	45 0 0	4 10 0	148 2 0
329	Hexham	137 17 4	466 10 0	224 11 7	18 0 0	846 18 11
330	Morpeth	72 1 1	499 6 0	80 0 0	9 0 0	660 7 1
331	Newcastle-on-Tyne	706 2 10	2,441 2 0	..	22 10 0	3,169 14 10
332	Rothbury	49 0 0	118 16 0	25 0 0	7 13 0	200 9 0
333	Tynemouth	421 9 8	1,440 12 0	132 10 0	27 0 0	2,021 11 8
	NOTTINGHAM.					
334	Basford	372 2 5	1,401 16 0	325 0 0	31 10 0	2,130 8 5
335	Bingham	75 3 0	162 0 0	35 0 0	9 0 0	281 3 0
336	East Retford	106 0 0	240 16 0	60 0 0	18 0 0	424 16 0
337	Mansfield	155 15 0	588 8 0	90 0 0	25 7 0	839 10 0
338	Newark	132 10 0	393 8 0	165 0 0	22 10 0	713 8 0
339	Nottingham	688 16 2	2,846 6 0	..	49 10 0	3,584 12 2
341	Southwell	168 14 0	365 6 0	156 10 0	9 0 0	699 10 0
342	Worksop	168 2 2	212 12 0	114 0 0	18 0 0	512 14 2

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION or PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
	OXFORD.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
343	Banbury	372 15 6	617 14 0	84 13 4	18 0 0	1,093 2 10
344	Bicester	152 10 0	289 8 0	70 10 0	9 0 0	521 8 0
345	Chipping Norton	178 15 0	402 12 0	109 10 0	9 0 0	699 17 0
346	Headington	102 2 3	534 18 0	72 10 0	9 0 0	718 10 3
347	Henley	383 11 0	466 8 0	117 10 0	9 0 0	976 9 0
348	Oxford	322 17 3	678 14 0	..	4 10 0	1,006 1 3
349	Thame	225 10 0	239 4 0	88 10 0	13 10 0	566 14 0
350	Witney	335 6 7	605 16 0	164 10 0	18 0 0	1,123 12 7
351	Woodstock	141 5 0	431 8 0	81 10 4	9 0 0	663 3 4
	RUTLAND.					
352	Oakham	77 10 0	225 10 0	31 6 6	4 10 0	338 16 6
353	Uppingham	98 15 0	210 4 0	81 13 6	13 10 0	404 2 6
	SALOP.					
354	Atcham	414 4 4	968 18 0	163 10 0	37 5 6	1,583 17 10
355	Bridgnorth	103 10 0	325 16 0	9 2 0	13 10 0	533 18 0
356	Church Stretton	114 12 0	149 12 0	4 6 0	8 9 6	317 19 6
357	Cleobury Mortimer	90 7 0	169 16 0	40 11 5	9 0 0	309 14 5
358	Clun	103 13 7	171 18 0	52 10 0	16 8 6	344 10 1
359	Drayton	71 0 10	233 16 0	80 0 0	13 10 0	398 6 10
360	Ellesmere	98 10 0	266 0 0	65 10 0	16 10 0	446 10 0
361	Ludlow	238 13 9	342 6 0	106 10 0	21 19 6	709 9 3
362	Madeley	98 0 0	657 4 0	33 0 0	17 11 0	805 15 0
363	Newport	76 12 9	327 12 0	58 0 0	9 0 0	471 4 9
364	Oswestry	218 4 8	470 12 0	131 18 0	18 0 0	838 14 8
365	Shiffnal	85 0 0	144 2 0	70 10 0	9 0 0	308 12 0
367	Wellington	165 3 2	551 2 0	55 0 0	13 10 0	784 15 2
368	Wem	119 15 9	192 8 0	65 0 0	9 0 0	386 3 9
368*a*	Whitchurch	109 0 8	231 8 0	56 10 0	9 0 0	405 18 8
	SOMERSET.					
369	Axbridge	378 1 11	781 4 0	145 11 0	22 10 0	1,327 6 11
370	Bath	489 6 2	1,023 10 0	155 0 0	27 0 0	1,694 16 2
371	Bedminster	482 12 6	1,282 4 0	125 0 0	18 0 0	1,907 16 6
372	Bridgwater	313 4 2	470 14 0	100 0 0	27 0 0	910 18 2
373	Chard	217 6 10	502 0 0	22 10 0	18 0 0	759 16 10
374	Clutton	234 11 0	489 18 0	92 15 4	18 0 0	835 4 4
375	Dulverton	117 0 0	65 8 0	40 0 0	4 10 0	226 18 0
376	Frome	338 17 10	222 8 0	140 0 0	18 0 0	719 5 10
377	Keynsham	211 17 8	374 0 0	..	17 12 6	603 10 2
378	Langport	226 1 8	391 4 0	45 0 0	13 10 0	675 15 8
379	Shepton Mallet	260 15 7	426 8 0	80 0 0	9 0 0	776 3 7
380	Taunton	409 17 9	808 16 0	148 15 0	22 10 0	1,389 18 9
381	Wellington	249 8 6	504 14 0	80 0 0	18 0 0	852 2 6
382	Wells	245 16 8	350 12 0	99 6 11	9 0 0	704 15 7
383	Williton	307 10 0	296 10 0	..	22 10 0	626 10 0
384	Wincanton	339 1 11	349 8 0	80 15 0	18 0 0	787 4 11
385	Yeovil	226 5 1	374 16 0	37 10 0	22 10 0	661 1 1
	SOUTHAMPTON.					
386	Alresford	125 1 9	224 0 0	20 0 0	9 0 0	378 1 9
387	Alton	215 0 0	340 8 0	35 10 0	9 0 0	599 18 0
388	Alverstoke	115 0 0	371 8 0	..	4 10 0	490 18 0
389	Andover	202 15 0	472 16 0	55 0 0	18 0 0	748 11 0
390	Basingstoke	289 3 4	358 18 0	85 0 0	13 10 0	746 11 4
391	Catherington	30 0 6	73 14 0	..	4 10 0	108 4 0
392	Christchurch	157 9 0	244 4 0	74 0 0	4 10 0	480 3 0
393	Droxford	177 12 0	262 0 0	112 10 0	13 10 0	565 12 0
394	Fareham	196 3 0	413 12 0	110 0 0	9 0 0	728 15 0
396	Fordingbridge	98 18 4	184 4 0	20 0 0	4 10 0	307 12 4
397	Hartley Wintney	220 9 3	447 14 0	101 4 0	13 10 0	782 17 3
398	Havant	77 10 0	164 4 0	35 10 0	4 10 0	281 14 0
399	Hursley	50 0 0	40 6 0	20 0 0	4 10 0	114 16 0
400	Kingsclere	121 9 6	215 12 0	60 0 0	9 0 0	406 1 6

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION OR PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
	SOUTHAMPTON—*cont.*	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
401	Lymington	123 3 0	147 4 0	41 19 6	9 0 0	321 6 6
402	New Forest	193 9 0	374 8 0	70 0 0	13 10 0	651 7 0
403	Petersfield	117 11 0	258 2 0	51 15 0	9 0 0	436 8 0
404	Portsea Island	962 15 3	2,123 8 0	..	18 0 0	3,104 3 3
405	Ringwood	87 2 1	95 8 0	40 0 0	4 10 0	227 0 1
406	Romsey	130 7 0	251 18 0	42 10 0	9 0 0	433 15 0
407	Southampton	526 10 10	824 16 0	..	4 10 0	1,355 16 10
408	South Stoneham	269 7 11	448 0 0	168 15 0	13 10 0	899 12 11
409	Stockbridge	118 15 0	152 18 0	45 0 0	9 0 0	325 13 0
410	Whitchurch	86 10 0	89 0 0	43 5 0	4 10 0	223 5 0
411	Wight, Isle of	592 4 6	1,385 16 0	171 15 5	22 10 0	2,172 5 11
412	Winchester, New	377 8 0	670 6 0	150 0 0	18 0 0	1,215 14 0
	STAFFORDSHIRE.					
415	Wolstanton and Burslem	303 2 10	622 8 0	115 12 6	13 10 0	1,054 13 4
416	Burton-on-Trent	299 5 0	572 4 0	150 0 0	16 10 0	1,037 19 0
417	Cheadle	100 13 4	195 16 0	55 0 0	18 0 0	369 9 4
419	Leek	145 10 9	338 0 0	80 0 0	17 15 6	581 6 3
420	Lichfield	145 0 0	523 12 0	100 0 0	13 10 0	782 2 0
421	Newcastle-under-Lyme	91 3 4	279 6 0	60 0 0	11 17 0	442 6 4
422	Cannock	102 10 0	335 14 0	82 10 0	13 10 0	534 4 0
423	Seisdon	84 0 0	237 4 0	102 10 0	13 10 0	437 4 0
424	Stafford	193 16 0	448 12 0	62 10 0	9 0 0	713 18 0
425	Stoke-upon-Trent	667 12 0	1,209 0 0	52 10 0	22 10 0	2,041 12 0
426	Stone	97 18 0	289 4 0	80 0 0	13 10 0	480 12 0
427	Tamworth	141 13 6	264 8 0	125 0 0	9 0 0	540 1 6
428	Uttoxeter	98 12 7	209 12 0	72 0 0	13 10 0	393 14 7
429	Walsall	180 0 0	1,395 12 0	56 10 0	18 0 0	1,650 2 0
430	West Bromwich	415 10 11	1,805 10 0	40 0 0	22 10 0	2,283 10 11
431	Wolverhampton	867 12 11	1,907 18 0	..	18 0 0	2,793 10 11
	SUFFOLK.					
432	Blything	283 11 0	383 14 0	100 0 0	13 10 0	780 15 0
433	Bosmere and Claydon	189 0 0	311 14 0	60 0 0	9 0 0	569 14 0
434	Bury St. Edmunds	90 0 0	236 12 0	..	4 10 0	331 2 0
435	Cosford	228 5 2	327 16 0	53 10 0	9 0 0	618 11 2
436	Hartismere	324 6 7	335 0 0	70 0 0	10 10 0	739 16 7
437	Hoxne	166 16 6	231 4 0	60 0 0	9 0 0	467 0 6
438	Ipswich	572 13 4	784 18 0	6 5 0	13 10 0	1,377 6 4
439	Mildenhall	100 0 0	77 16 0	42 3 0	9 0 0	228 19 0
440	Mutford and Lothingland	146 0 0	531 4 0	50 0 0	13 10 0	740 14 0
441	Plomesgate	212 10 9	318 2 0	85 0 0	22 10 0	638 2 9
442	Risbridge	178 16 0	221 8 0	92 10 0	13 10 0	506 4 0
443	Samford	160 10 0	113 10 0	63 0 0	9 0 0	346 0 0
444	Stow	246 4 0	318 12 0	55 0 0	13 10 0	633 6 0
445	Sudbury	242 5 0	657 0 0	95 0 0	22 10 0	1,016 15 0
446	Thingoe	314 1 0	201 12 0	85 0 0	13 10 0	614 3 0
447	Wangford	111 0 0	299 18 0	47 0 10	9 0 0	466 18 10
448	Woodbridge	264 17 0	437 4 0	50 0 0	13 10 0	765 11 0
	SURREY.					
450	Camberwell	790 16 10	2,041 0 0	..	18 0 0	2,849 16 10
451	Chertsey	279 18 9	451 10 0	151 0 0	13 10 0	925 18 9
452	Croydon	833 14 10	1,803 8 0	126 5 0	9 0 0	2,772 7 10
453	Dorking	170 0 0	390 8 0	57 16 2	9 0 0	537 4 2
454	Epsom	312 0 10	663 6 0	139 5 0	13 10 0	1,128 1 10
455	Farnham	218 18 1	502 12 0	20 0 0	9 0 0	750 10 1
457	Godstone	179 9 10	277 6 0	40 0 0	4 10 0	501 5 10
458	Guildford	311 15 0	561 0 0	161 5 0	22 10 0	1,056 10 0
459	Hambledon	182 10 0	314 12 0	72 10 0	9 0 0	578 12 0
460	Kingston	390 0 0	1,096 16 0	140 0 0	18 0 0	1,644 16 0
461	Lambeth	1,891 14 5	5,411 2 0	..	36 0 0	7,338 16 5
463	Olave, St.	1,077 10 7	2,796 16 0	..	27 0 0	3,901 6 7
464	Reigate	278 4 4	625 4 0	113 0 0	9 0 0	1,025 8 4
465	Richmond	198 17 5	567 8 0	135 0 0	9 0 0	910 5 5
467	Saviour, St.	1,566 18 1	5,630 6 0	..	36 0 0	7,233 4 1
468	Wandsworth & Clapham	766 6 6	2,491 16 0	..	22 10 0	3,280 12 6

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION OR PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
	SUSSEX.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
470	Battle	199 10 0	177 8 0	90 10 0	13 10 0	480 18 0
471	Brighton	769 17 3	2,295 0 0	..	13 10 0	3,078 7 3
472	Chailey	152 5 0	141 12 0	75 0 0	9 0 0	377 17 0
473	Chichester	52 10 0	178 8 0	..	4 10 0	235 8 0
474	Cuckfield	313 11 6	341 6 0	124 12 6	13 10 0	793 0 0
475	Eastbourne	289 3 0	198 6 0	68 2 6	9 0 0	564 11 6
476	East Grinstead	278 16 11	209 0 0	110 5 0	13 10 0	611 11 11
476*a*	East Preston	210 10 0	335 2 0	61 0 0	13 10 0	620 2 0
477	Hailsham	226 10 11	332 14 0	100 15 0	9 0 0	668 19 11
478	Hastings	284 5 3	592 10 0	..	13 10 0	890 5 3
479	Horsham	259 0 0	412 8 0	83 0 0	13 10 0	767 18 0
480	Lewes	137 10 0	207 2 0	29 17 2	4 10 0	378 19 2
481	Midhurst	224 15 8	255 16 0	42 0 0	13 10 0	536 1 8
482	Newhaven	82 10 0	128 10 0	54 15 0	9 0 0	274 15 0
483	Petworth	152 9 4	163 8 0	48 10 0	9 0 0	373 7 4
484	Rye	176 0 0	199 16 0	..	9 0 0	384 16 0
485	Steyning	221 0 0	539 18 0	114 10 0	9 0 0	884 8 0
486	Thakeham	143 6 0	174 4 0	30 0 0	9 0 0	356 10 0
487	Ticehurst	254 4 8	278 8 0	104 12 6	18 0 0	655 5 2
488	Uckfield	250 7 7	285 16 0	103 5 0	18 0 0	657 8 7
489	Westbourne	96 18 0	106 8 0	37 5 0	4 10 0	245 1 0
490	West Firle	42 10 0	30 0 0	40 0 0	4 10 0	117 0 0
491	Westhampnett	395 7 9	385 8 0	100 0 0	26 5 0	907 0 9
	WARWICKSHIRE.					
492	Alcester	170 0 0	429 10 0	141 10 0	18 0 0	759 0 0
493	Aston	470 13 10	2,119 4 0	85 0 0	18 0 0	2,692 17 10
494	Atherstone	81 10 0	161 0 0	70 0 0	4 10 0	317 0 0
495	Birmingham	1,721 15 11	6,546 14 0	..	22 10 0	8,290 19 11
496	Coventry	242 11 0	838 8 0	22 10 0	9 0 0	1,112 9 0
497	Foleshill	112 12 0	368 16 0	85 0 0	9 0 0	575 8 0
498	Meriden	102 10 0	291 12 0	122 10 0	9 0 0	525 12 0
499	Nuneaton	72 10 0	220 2 0	..	4 10 0	297 2 0
500	Rugby	203 13 11	489 2 0	180 0 0	13 10 0	886 5 11
501	Solihull	142 11 3	444 14 0	150 0 0	13 10 0	750 15 3
502	Southam	146 17 10	225 12 0	80 0 0	4 10 0	456 19 10
503	Stratford-on-Avon	243 1 7	597 0 0	151 0 0	22 10 0	1,013 11 7
504	Warwick	374 0 0	1,400 0 0	102 10 0	18 0 0	1,894 10 0
	WESTMORLAND.					
505	East Ward	77 17 6	285 14 0	56 10 0	13 10 0	433 11 6
506	Kendal	333 11 11	574 14 0	162 0 0	22 10 0	1,092 15 11
507	West Ward	40 14 3	160 8 0	27 10 0	9 0 0	237 12 3
	WILTSHIRE.					
508	Alderbury	361 3 4	478 8 0	70 0 0	18 0 0	927 11 4
509	Amesbury	162 11 0	144 4 0	50 0 0	13 10 0	370 5 0
510	Bradford	175 3 11	360 16 0	40 0 0	9 0 0	584 19 11
511	Calne	113 6 8	239 16 0	18 10 0	3 0 0	374 12 8
512	Chippenham	279 3 10	484 16 0	150 0 0	18 0 0	931 19 10
513	Cricklade and Wootton Bassett	58 18 9	131 8 0	12 10 0	3 0 0	205 16 9
514	Devizes	261 18 0	738 0 0	80 0 0	10 10 0	1,090 8 0
515	Highworth and Swindon	184 17 4	364 12 0	37 10 0	9 0 0	595 19 4
516	Malmesbury	150 10 0	283 2 0	60 0 0	9 0 0	502 12 0
517	Marlborough	133 5 6	265 8 0	28 0 0	4 10 0	431 3 6
518	Melksham	208 5 11	537 14 0	45 0 0	9 0 0	799 19 11
519	Mere	112 18 6	134 18 0	42 10 0	4 10 0	294 16 6
520	Pewsey	181 18 9	277 0 0	47 10 0	9 0 0	515 8 9
522	Tisbury	104 15 0	226 6 0	50 0 0	13 10 0	394 11 0
523	Warminster	251 7 9	338 8 0	54 2 5	13 10 0	657 8 2
524	Westbury and Whorwelsdown	159 10 0	207 8 0	65 0 0	13 10 0	445 8 0
525	Wilton	180 7 9	259 0 0	62 10 0	9 0 0	510 17 9

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION OR PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
	WORCESTERSHIRE.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
526	Bromsgrove	125 0 0	476 8 0	36 2 11	13 10 0	651 0 11
527	Droitwich	264 0 11	625 16 0	92 5 4	13 10 0	995 12 3
528	Dudley	460 10 0	1,730 16 0	..	18 0 0	2,209 6 0
529	Evesham	140 16 7	201 16 0	125 0 0	9 0 0	476 12 7
530	Kidderminster	424 14 9	802 0 0	87 10 0	22 10 0	1,336 14 9
531	King's Norton	295 5 8	1,135 14 0	132 16 10	13 10 0	1,577 6 6
532	Martley	222 10 1	326 12 0	85 0 0	18 0 0	652 2 1
533	Pershore	143 17 6	331 14 0	75 0 0	13 10 0	564 1 6
534	Shipston-on-Stour	204 15 0	332 4 0	75 0 0	18 0 0	629 19 0
535	Stourbridge	384 5 10	1,143 4 0	180 0 0	13 10 0	1,720 19 10
536	Tenbury	72 10 0	95 16 0	57 0 0	9 0 0	234 6 0
537	Upton-on-Severn	185 6 7	572 8 0	80 0 0	13 10 0	851 4 7
538	Worcester	282 6 4	844 4 0	82 0 11	13 10 0	1,172 1 3
	YORKSHIRE, E. RIDING.					
539	Beverley	113 7 10	373 4 0	51 5 0	16 7 0	554 3 10
540	Bridlington	75 0 0	202 18 0	40 0 0	13 5 6	331 3 6
541	Driffield	135 0 8	320 8 0	66 0 0	18 0 0	539 8 8
542	Howden	110 0 0	231 4 0	37 10 0	17 0 6	395 14 6
542*a*	Kingston-upon-Hull	294 6 4	755 4 0	..	13 10 0	1,063 0 4
543	Patrington	69 5 0	146 8 0	55 0 0	4 10 0	275 3 0
544	Pocklington	118 2 0	215 8 0	48 10 0	13 10 0	395 10 0
545	Sculcoates	322 10 0	1,311 16 0	..	35 11 0	1,669 17 0
546	Skirlaugh	108 10 0	134 4 0	40 0 0	20 3 6	302 17 6
547	York	404 5 3	762 4 0	135 0 0	29 18 6	1,331 7 9
	YORKSHIRE, N. RIDING.					
547*a*	Aysgarth	40 0 0	79 8 0	27 10 0	9 0 0	155 18 0
548*a*	Bedale	56 15 0	183 4 0	42 10 0	9 0 0	291 9 0
548	Easingwold	87 4 0	179 8 0	..	13 1 0	279 13 0
549	Guisborough	126 9 6	299 16 0	121 0 0	17 14 0	564 19 6
550	Helmsley	43 0 0	62 8 0	35 0 0	8 17 0	149 5 0
550*a*	Kirkby Moorside	28 10 0	56 12 0	32 10 0	4 10 0	122 2 0
551	Leyburn	51 0 0	166 14 0	..	9 0 0	226 14 0
552	Malton	170 12 0	389 6 0	85 0 0	21 18 0	666 16 0
552*a*	Middlesbrough	290 16 8	939 8 0	88 0 0	13 10 0	1,331 14 8
553	Northallerton	108 11 0	287 12 0	45 16 1	9 0 0	450 19 1
554	Pickering	74 8 9	138 8 0	46 10 0	16 7 0	275 13 9
555	Reeth	38 17 8	46 10 0	45 18 5	..	131 6 1
556	Richmond	70 10 0	237 10 0	115 0 0	16 5 6	439 5 6
557	Scarborough	217 10 0	634 6 0	41 13 4	17 17 0	911 6 4
558	Stokesley	74 10 0	147 4 0	65 0 0	9 0 0	295 14 0
559	Thirsk	116 10 0	241 8 0	45 0 0	19 4 0	422 2 0
560	Whitby	107 10 0	529 12 0	..	13 10 0	650 12 0
	YORKSHIRE, W. RIDING.					
561	Barnsley	258 8 6	950 10 0	100 0 0	18 0 0	1,326 18 6
562	Bramley	120 10 1	576 12 0	..	13 10 0	710 12 1
563	Bradford	439 17 9	1,795 18 0	..	18 0 0	2,253 15 9
563*a*	Bierley, North	203 0 0	1,338 12 0	..	40 10 0	1,582 2 0
564	Dewsbury	276 4 8	1,356 2 0	..	40 10 0	1,672 16 8
565	Doncaster	215 6 8	782 12 0	191 0 0	22 10 0	1,211 8 8
566	Ecclesall Bierlow	260 10 0	934 10 0	25 0 0	18 0 0	1,238 0 0
567	Goole	117 10 0	161 14 0	104 6 3	13 10 0	397 0 3
568	Halifax	311 16 8	2,982 2 0	70 0 0	45 0 0	3,408 18 8
569	Hemsworth	60 0 0	99 12 0	..	4 10 0	164 2 0
569*a*	Holbeck	65 0 0	222 2 0	..	4 10 0	291 12 0
570	Huddersfield	302 12 6	1,781 16 0	..	45 0 0	2,129 8 6
570*a*	Hunslet	233 11 5	675 8 0	85 0 0	13 10 0	1,007 9 5
571	Keighley	134 0 0	388 4 0	42 4 8	13 10 0	577 18 8
572	Knaresborough	117 10 0	266 0 0	102 10 0	9 0 0	495 0 0
573	Leeds	1,307 19 11	3,477 6 0	22 10 0	22 10 0	4,830 5 11
574	Ouseburn, Great	103 0 0	145 18 0	70 0 0	13 10 0	332 8 0
575	Pateley Bridge	40 0 0	106 16 0	45 0 0	15 15 0	207 11 0
575*a*	Penistone	79 10 0	194 16 0	44 10 0	13 10 0	332 6 0
576	Pontefract	160 7 6	440 12 0	..	18 0 0	618 19 6
577	Ripon	106 16 8	226 18 0	50 0 0	16 11 6	400 6 2

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION or PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
	YORKSHIRE, W. R.—*cont.*	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
578	Rotherham	265 14 0	808 8 0	175 0 0	22 10 0	1,271 12 0
578*a*	Saddleworth	34 5 0	216 14 0	..	9 0 0	259 19 0
579	Sedbergh	25 0 0	48 0 0	24 0 0	9 12 0	106 12 0
580	Selby	67 5 0	183 8 0	67 0 0	13 10 0	331 3 0
581	Settle	81 17 6	73 8 0	114 10 0	15 10 6	285 6 0
582	Sheffield	1,117 10 8	1,629 16 0	..	31 10 0	2,778 16 8
583	Skipton	152 13 5	367 0 0	152 6 4	28 13 0	700 12 9
584	Tadcaster	83 18 4	196 8 0	145 0 0	13 10 0	438 16 4
585	Thorne	118 10 0	159 4 0	65 17 10	13 10 0	357 1 10
586	Wakefield	277 10 10	992 8 0	90 0 0	31 10 0	1,391 8 10
586*a*	Wetherby	71 10 0	220 4 0	75 0 0	9 0 0	375 14 0
586*b*	Wharfedale	67 10 0	362 6 0	..	18 0 0	447 16 0
587	Wortley	100 17 0	355 18 0	172 10 0	13 10 0	642 15 0
	WALES.					
	ANGLESEY.					
588	Anglesey	99 17 6	166 4 0	74 0 9	13 10 0	353 12 3
588*a*	Holyhead	123 3 11	185 16 0	16 17 6	13 10 0	339 7 5
	BRECKNOCKSHIRE.					
589	Brecknock	160 0 0	263 12 0	120 0 0	20 15 6	564 7 6
590	Builth	125 5 0	182 10 0	27 10 0	13 1 0	348 6 0
591	Crickhowell	77 6 2	414 18 0	75 0 0	21 6 0	588 10 2
592	Hay	90 0 0	239 4 0	..	22 10 0	351 14 0
	CARDIGANSHIRE.					
593	Aberayron	42 10 0	77 16 0	25 0 0	9 0 0	154 6 0
594	Aberystwith	65 0 0	248 8 0	70 0 0	18 0 0	401 8 0
595	Cardigan	62 0 0	443 0 0	52 0 0	13 10 0	570 10 0
596	Lampeter	35 0 0	112 2 0	20 10 0	17 11 0	185 3 0
597	Tregaron	40 0 0	133 12 0	20 0 0	13 10 0	207 2 0
	CARMARTHENSHIRE.					
598	Carmarthen	165 0 0	522 16 0	100 0 0	18 0 0	805 16 0
599	Llanelly	133 4 0	442 12 0	147 13 10	18 0 0	741 9 10
600	Llandilo Fawr	87 12 0	312 4 0	45 0 0	21 3 0	465 19 0
601	Llandovery	62 10 0	241 0 0	30 0 0	27 6 0	360 16 0
602	Newcastle-in-Emlyn	80 0 0	152 18 0	55 0 0	13 10 0	301 8 0
	CARNARVONSHIRE.					
603	Bangor and Beaumaris	233 10 8	343 10 0	153 12 8	13 10 0	744 3 4
604	Carnarvon	176 3 4	268 14 0	133 16 7	18 0 0	596 13 11
605	Conway	103 10 0	255 6 0	108 15 8	12 12 0	480 3 8
606	Pwllheli	160 0 0	155 16 0	70 3 4	18 0 0	403 19 4
	DENBIGHSHIRE.					
607	Llanrwst	55 0 0	47 8 0	73 10 5	13 10 0	189 8 5
608	Ruthin	126 0 5	270 16 0	78 0 3	23 6 6	498 3 2
609	Wrexham	242 9 0	583 8 0	183 6 4	13 10 0	1,022 13 4
	FLINTSHIRE.					
610	Asaph, Saint	278 1 0	441 16 0	115 0 0	13 10 0	848 7 0
610*a*	Hawarden	56 0 0	179 10 0	58 0 0	4 10 0	298 0 0
611	Holywell	200 0 0	520 2 0	151 13 4	18 0 0	889 15 4

AMOUNT PAID to each Union and Parish under a Board of Guardians, School and Sick Asylum Districts, in England and Wales, out of Grants made by Parliament, &c.—*continued.*

No.	UNION OR PARISH.	Grant for Medical Officers', and School-masters', and School-mistresses' Salaries.	Grant for Maintenance of Pauper Lunatics.	Grant for Rural Sanitary Officers' Salaries.	Grant for additional Fees to Registrars of Births and Deaths.	TOTAL.
	GLAMORGANSHIRE.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
612	Bridgend and Cowbridge	246 17 0	770 16 0	89 19 3	13 10 0	1,121 2 3
613	Cardiff	878 7 3	1,841 12 0	215 0 0	13 10 0	2,948 9 3
613*a*	Gower	45 0 0	27 4 0	30 0 0	9 0 0	111 4 0
614	Merthyr Tydfil	322 16 8	1,536 16 0	155 0 0	18 0 0	2,032 12 8
615	Neath	134 18 0	649 8 0	144 0 0	18 0 0	946 6 0
615*a*	Pontypridd	117 10 0	663 4 0	98 2 6	13 10 0	892 6 6
615*b*	Pontardawe	40 10 0	219 8 0	110 0 0	4 10 0	374 8 0
616	Swansea	195 2 0	1,320 2 0	..	18 0 0	1,533 4 0
	MERIONETHSHIRE.					
617	Bala	30 0 0	78 6 0	30 0 0	4 10 0	142 16 0
618	Corwen	76 10 6	212 16 0	57 10 0	9 0 0	355 16 6
619	Dolgelly	90 3 0	196 4 0	37 5 0	9 0 0	332 12 0
620	Festiniog	135 3 5	189 0 0	82 17 0	13 10 0	420 10 5
	MONTGOMERYSHIRE.					
621	Llanfyllin	159 7 3	383 16 0	89 15 3	13 10 0	646 8 6
622	Machynlleth	112 0 0	175 4 0	55 0 0	13 10 0	355 14 0
623	Forden	96 10 1	245 16 0	34 0 0	13 10 0	389 16 1
624	Newtown and Llanidloes	249 19 6	463 6 0	91 13 3	27 0 0	831 18 9
	PEMBROKESHIRE.					
626	Haverfordwest	193 3 4	740 8 0	80 0 0	18 0 0	1,031 11 4
627	Narberth	110 10 0	405 0 0	46 0 0	27 0 0	588 10 0
628	Pembroke	131 4 0	311 4 0	40 0 0	13 10 0	495 18 0
	RADNORSHIRE.					
629	Knighton	160 0 0	303 6 0	51 5 0	13 10 0	528 1 0
631	Rhayader	62 12 6	133 8 0	25 0 0	9 0 0	230 0 6
	SCHOOL DISTRICTS.					
1	Central London	1,501 4 11	..	..	..	1,501 4 11
2	South Metropolitan	1,481 5 9	..	..	..	1,481 5 9
3	North Surrey	1,184 14 3	..	..	..	1,184 14 3
4	Farnham and Hartley Wintney	182 0 0	..	..	..	182 0 0
5	South-east Shropshire	210 3 4	..	..	..	210 3 4
6	Reading and Wokingham	323 0 9	..	..	..	323 0 9
9	West London	696 13 2	..	..	..	696 13 2
11	Forest Gate	863 8 6	..	..	..	863 8 6
12	Walsall and West Bromwich	421 6 4	..	..	..	421 6 4
13	Kensington and Chelsea	719 6 11	..	..	..	719 6 11
14	Brentwood	617 9 3	..	..	..	617 9 3
	SICK ASYLUMS DISTRICTS.					
	Central London	829 19 2	..	..	..	829 19 2
	Poplar and Stepney	450 9 1	..	..	..	450 9 1
	Metropolitan Asylums Board	4,495 8 6	..	..	..	4,495 8 6
	COUNTIES & BOROUGHS URBAN	..	17,869 3 4 ..	.. 22,949 14 4	..	17,869 3 4 22,949 14 4
	TOTALS	181,556 12 2	427,399 9 4	67,481 6 6	9,640 14 6	686,578 2 6

No. 103.

Grant in Aid of Disturnpiked and Main Roads.

Table showing the Amounts paid to Highway Authorities in each County in England and North Wales out of the Grant made by Parliament for the Financial Year 1882–83, in aid of the Cost of Maintenance of Disturnpiked and Main Roads.

Counties.	Amount of Payments made to the several Highway Authorities.				
	1. Urban Districts (exclusive of Quarter Sessions Boroughs).	2. Highway Districts.	3. Separate Highway Parishes.	4. Quarter Sessions Boroughs and Metropolitan Parishes.	Total.
England.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Bedford	141 18 4	857 16 10	155 0 2	—	1,154 15 4
Berks	234 15 7	1,985 7 2	933 1 3	82 6 8	3,235 10 8
Bucks	313 11 5	—	1,778 11 7	25 18 4	2,118 1 4
Cambridge	305 15 6	—	1,359 18 9	137 10 0	1,803 4 3
Chester	2,091 0 8	2,622 8 6	—	—	4,713 9 2
Cornwall	430 2 10	1,738 9 8	37 17 10	8 0 8	2,214 11 0
Cumberland	9 5 4	644 18 7	93 6 6	24 8 1	771 18 6
Derby	1,538 15 7	433 12 6	1,941 16 9	33 2 7	3,947 7 5
Devon	674 2 7	1,464 3 0	226 1 8	222 3 1	2,586 10 4
Dorset	483 10 6	1,626 12 0	1 16 3	—	2,111 18 9
Durham	1,255 18 10	3,400 12 8	—	—	4,656 11 6
Essex	1,159 17 1	—	—	—	1,159 17 1
Gloucester	1,384 9 11	7,628 7 5	788 8 10	138 7 0	9,939 13 2
Hants	595 17 0	2,110 8 0	—	146 4 10	2,852 9 10
Hereford	197 6 2	3,623 7 0	3 15 4	—	3,824 8 6
Herts	368 6 0	286 9 11	717 12 5	—	1,372 8 4
Hunts	192 18 7	1,028 6 11	—	—	1,221 5 6
Kent	1,828 15 7	6,300 19 0	—	541 5 5	8,671 0 0
Lancaster	7,222 1 8	1,574 0 0	3,092 2 9	—	11,888 4 5
Leicester	506 6 8	2,221 2 10	—	177 11 9	2,905 1 3
Lincoln	1,005 19 8	363 11 11	4,262 3 4	171 17 6	5,803 12 5
Middlesex	6,166 15 4	324 15 8	575 9 0	*1,523 19 0	8,590 19 0
Monmouth	447 9 8	1,266 7 2	29 14 1	—	1,743 10 11
Norfolk	252 6 2	—	2,011 11 3	274 16 2	2,538 13 7
Northampton	421 5 4	1,655 2 1	307 0 1	—	2,383 7 6
Northumberland	182 13 11	791 3 4	125 8 11	—	1,099 6 2
Nottingham	451 5 10	1,012 9 1	329 18 3	190 5 5	1,983 18 7
Oxford	472 13 8	2,882 6 4	6 4 10	45 14 0	3,406 18 10
Rutland	—	—	414 0 1	—	414 0 1
Salop	55 13 5	3,612 12 6	160 13 1	212 2 1	4,041 1 1
Somerset	1,042 18 3	7,214 2 4	—	—	8,257 0 7
Stafford	3,581 10 5	—	1,000 15 0	881 19 0	5,464 4 5
Suffolk	—	—	366 0 9	28 19 8	395 0 5
Surrey	774 18 8	3,562 3 8	54 2 11	3 15 10	4,395 1 1
Sussex	459 15 5	1,554 3 4	2,247 19 8	100 4 9	4,362 3 2
Warwick	897 5 2	312 14 8	2,112 19 11	42 6 8	3,365 6 5
Westmorland	76 6 6	—	192 18 5	—	269 4 11
Wilts	963 5 7	6,005 16 2	—	—	6,969 1 9
Worcester	1,106 2 7	2,052 5 8	1,800 12 8	33 11 2	4,992 12 1
York, East Riding	379 8 0	—	302 6 10	101 8 5	783 3 3
„ North Riding	13 19 4	1,478 8 7	—	10 0 7	1,502 8 6
„ West Riding	8,446 13 0	2,529 3 2	3,378 14 5	1,175 9 1	15,529 19 8
Carried forward	48,133 1 9	76,164 7 8	30,808 3 7	6,333 7 9	161,439 0 9

* Paid to parishes and districts in Metropolis.

TABLE showing the AMOUNTS PAID to HIGHWAY AUTHORITIES in each COUNTY in ENGLAND and WALES, &c.— *continued.*

COUNTIES.	AMOUNT OF PAYMENTS MADE TO THE SEVERAL HIGHWAY AUTHORITIES.				
	1. Urban Districts (exclusive of Quarter Sessions Boroughs).	2. Highway Districts.	3. Separate Highway Parishes.	4. Quarter Sessions Boroughs.	TOTAL.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Brought forward -	48,133 1 9	76,164 7 8	30,808 3 7	6,333 7 9	161,439 0 9
NORTH WALES.					
Anglesey - - -	—	—	—	—	—
Carnarvon - - -	—	—	186 2 1	—	186 2 1
Denbigh - - -	188 0 3	873 18 0	133 9 1	—	1,195 7 4
Flint - - - -	—	449 14 0	147 13 9	—	597 7 9
Merioneth - - -	10 15 0	72 8 11	—	—	83 3 11
Montgomery - -	19 16 0	875 11 1	—	—	895 7 1
TOTAL - -	48,351 13 0	78,435 19 8	31,275 8 6	6,333 7 9	164,396 8 11

SUMS PAID to the COUNTY AUTHORITIES of SOUTH WALES out of the GRANT VOTED by PARLIAMENT for the Financial Year 1882–83, in aid of the Cost of Maintenance of Disturnpiked and Main Roads.

COUNTY.	Sums paid out of Grant.
	£ s. d.
Brecon - - - -	571 1 10
Cardigan - - - -	151 15 2
Carmarthen - - -	1,065 4 9
Glamorgan - - - -	719 14 6
Pembroke - - -	177 10 0
Radnor - - - -	220 13 7
TOTAL - - -	2,905 19 10

PAYMENTS to ROAD AUTHORITIES in SCOTLAND out of the GRANT made by PARLIAMENT for the Financial Year 1882–83, in aid of the Cost of Maintenance of Disturnpiked and Main Roads.

Payments to Road Authorities of Counties and Districts.	Payments to Road Authorities of Burghs.	Total Payments.
£ s. d.	£ s. d.	£ s. d.
16,874	3,612 12 1	20,486 18 1

Appendix K.

Local Government and Public Health.

Page.

No. 104. Loans sanctioned to Urban Sanitary Authorities during the Year ended 31st December 1882 - - - 376

No. 105. Ditto, Rural Sanitary Authorities during same period - 385

No. 106. Loans recommended by the Board to be advanced by the Public Works Loan Commissioners to Urban Sanitary Authorities, under section 243 of the Public Health Act, 1875, during the Year ended 31st December 1882 - - 389

No. 107. Loans recommended by the Board to be advanced by the Public Works Loan Commissioners to Rural Sanitary Authorities under section 243 of the Public Health Act, 1875, during the Year ended the 31st December 1882 - 392

No. 108. Local Government Districts constituted during the Year 1882, in pursuance of Resolutions of Owners and Rate-payers - - - - - - - 395

No. 109. Local Government Districts and Improvement Act Districts extended by Provisional Order during the Year 1882 - - - - - - 396

No. 110. Provisional Orders issued in 1882 - - - 397

No. 111. List of Confirming Acts passed in 1882, and of Provisional Orders thereby confirmed - - - - - - 402

No. 112. Local Acts promoted by Urban Sanitary Authorities, &c. during the Session of 1882 - - - - - - 405

No. 113. Byelaws confirmed by the Board in 1882 - - - 406

No. 114. Byelaws confirmed under the Highways and Locomotives (Amendment) Act 1878 - - - - - 409

No. 115. Inquiries held by Inspectors in 1882 - - - 410

No. 116. List of Port Sanitary Authorities as existing on the 31st December 1882 - - - - - - - 431

No. 117. Statement of Rural Sanitary Authorities upon whom Urban Powers have been conferred during the Year 1882 - 436

No. 118. List of Special Drainage Districts formed or dissolved during the Year 1882 - - - - - - 439

No. 119. Abstract of Reports of Public Analysts for the Year 1882 - 440

No. 120. Report of Analyst to Commissioners of Customs on the Examinations of Tea made under section 30 of the Sale of Food and Drugs Act, 1875 - - - - 442

No. 121. Extract from Letter from the Principal Officer of the Commissioners of Inland Revenue as to Milk Standards - 444

No. 122. Number of Works in each County of England and Wales, Scotland, and Ireland registered under the Alkali, &c. Works Regulation Act, 1881, in the Year 1882 - - 445

No. 104.

LOANS sanctioned by the BOARD to URBAN SANITARY AUTHORITIES under the PUBLIC HEALTH ACT, 1875, and LOCAL ACTS, during the Year ended with 31st December 1882.

District.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
				£
Aberavon	Glamorgan	Gas supply	30	1,300
Aberzavenny	Monmouth	Street improvement	20	1,600
Ditto	Ditto	Ditto	5	417
Ditto	Ditto	Sewerage and sewage disposal	30	4,200
Abram	Lancaster	Street improvement	20	3,000
Ditto	Ditto	Water supply	30	6,000
Acton	Middlesex	Private street improvement	5	5,210
Ditto	Ditto	Ditto	7	5,000
Ditto	Ditto	Warming and ventilating board room, and for manholes.	20	200
Adlington	Lancaster	Water supply	30	400
Alton	Hants	Paving	15	250
Alverstoke	Ditto	Private street improvement	10	5,222
Arlecdon and Frizington.	Cumberland	Hospital	30	490
Ashborne	Derby	Market purposes	40	3,000
Ashford	Kent	Water supply	30	550
Ditto	Ditto	Ditto	30	4,278
Astley Bridge	Lancaster	Sewerage	20	745
Ditto	Ditto	Street improvement	20	585
Aston Manor	Warwick	Disinfecting apparatus	20	230
Ditto	Ditto	Steam road roller	15	550
Audenshaw	Lancaster	Street improvement	20	2,000
Ditto	Ditto	Purchase of land for sewage disposal.	50	3,300
Baildon	York	Sewerage	30	698
Ditto	Ditto	Water supply	30	264
Ditto	Ditto	Offices	30	100
Ditto	Ditto	Street improvement	20	410
Bala	Merioneth	Water supply	50	550
Balsall Heath	Worcester	Sewerage	30	4,434
Ditto	Ditto	Offices	30	1,434
Ditto	Ditto	Purchase of land and erection of stables.	30	363
Ditto	Ditto	Construction of bridges	30	800
Ditto	Ditto	Fire appliances	15	281
Bangor	Carnarvon	Sewerage	30	1,000
Ditto	Ditto	Sewerage in private streets	7	500
Barton, Eccles, Winton, and Monton.	Lancaster	Purchase of land and extension of baths.	30	1,150
Ditto	Ditto	Street improvement	20	650
Ditto	Ditto	Private street improvement	10	19,350
Barnsley	York	Street improvement	30	5,400
Barnstaple	Devon	Sewerage	30	306
Beckenham	Kent	Sewerage in Beckenham Sewerage area.	50	1,050
Ditto	Ditto	Street improvement	28	1,671
Ditto	Ditto	Offices, stables, and a depôt	40	6,000
Beeston	Nottingham	Sewerage and sewage disposal	30	8,700
Ditto	Ditto	Sewering private streets	3	2,438
Ditto	Ditto	Sewerage	30	4,000
Benwell and Fenham	Northumberland	Steam road roller	10	500
Bethesda	Carnarvon	Water supply	50	5,400
Ditto	Ditto	Sewerage and sewage disposal	50	7,577
Bexley	Kent	Private street improvement	7	1,000
Ditto	Ditto	Ditto	3	1,000
Bingley (Local Board).	York	Public lighting	20	500
Birkdale	Lancaster	Private street improvement	5	605
Ditto	Ditto	Ditto	3	800

District.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
				£
Birmingham	Warwick	Purchase of property for street improvment.	14	7,475
Ditto	Ditto	Works in connexion with Smithfield Market.	30	10,000
Ditto	Ditto	Street improvement	60	2,020
Ditto	Ditto	Ditto	60	1,000
Ditto	Ditto	Extension of buildings at Montague Wharf.	30	15,800
Ditto	Ditto	Disposal of refuse	20	11,200
Ditto	Ditto	Gateway to Smithfield Market, stables, &c.	30	800
Ditto	Ditto	Laying out St. Mary's burial ground	25	1,500
Bishop Stortford	Hertford	Hospital	20	200
Blackpool	Lancaster	Works connected with the esplanade.	50	1,764
Ditto	Ditto	Market purposes	50	297
Ditto	Ditto	Town depôt	50	4,561
Ditto	Ditto	Sewerage	30	4,520
Ditto	Ditto	Paving	20	439
Ditto	Ditto	Weighing machine and fire-engine	10	850
Ditto	Ditto	Purchase of land for slaughter-houses, storing materials, &c.	50	3,241
Ditto	Ditto	Sewage disposal	50	2,379
Ditto	Ditto	Street improvement	50	547
Ditto	Ditto	Purchase of land for gas purposes	50	710
Ditto	Ditto	Improving the esplanade	50	432
Blackrod	Ditto	Offices	30	400
Blaenavon	Monmouth	Making a new road	30	1,282
Blaydon	Durham	Sewerage	30	6,000
Bolton	Lancaster	Private street improvement	20	50,000
Bootle-cum-Linacre	Ditto	Survey	30	1,500
Ditto	Ditto	Street improvement	7	1,200
Ditto	Ditto	Sewerage	20	296
Ditto	Ditto	Street improvement	20	7,432
Bournemouth	Southampton	Street improvement and fire-engine	20	2,250
Ditto	Ditto	Expenses in connexion with sewerage works.	30	650
Ditto	Ditto	Purchase of land for site for hospital.	50	1,400
Ditto	Ditto	Sewerage	30	1,420
Ditto	Ditto	Private street improvement	10	1,350
Bowness	Westmoreland	Sewage disposal	30	350
Bradford	Wilts	Purchase of market rights and tolls	30	250
Ditto	Ditto	Water supply	30	5,490
Brampton and Walton.	Derby	Sewerage and sewage disposal	30	2,150
Ditto	Ditto	Ditto	30	1,669
Brentford	Middlesex	Ditto	50	2,000
Ditto	Ditto	Ditto	30	28,000
Bridgnorth	Salop	Street improvement	20	450
Ditto	Ditto	Purchase of gas undertaking	50	16,000
Brighouse	York	Repayment of previous loan	13	1,380
Bristol	City and County	Reconstruction of a bridge	30	15,952
Broadstairs and St. Peters.	Kent	Hydrants	30	250
Ditto	Ditto	Steps from terrace to sea-shore	30	600
Ditto	Ditto	Fire-engine, fire-escape, and engine-hose.	10	312
Ditto	Ditto	Paving and channelling	20	1,290
Ditto	Ditto	Tar-paving	5	360
Ditto	Ditto	Sewerage	30	10,000
Ditto	Ditto	Offices, &c.	30	1,738
Bromley	Ditto	Street improvement	50	3,000
Bromsgrove	Worcester	Sewerage	30	2,325
Buglawton	Chester	Water supply	30	250
Burley	York	Ditto	30	1,400
Burnley	Lancaster	Erection of a bridge and street improvements.	20	1,700
Ditto	Ditto	Rebuilding a bridge, and widening and improving roadway.	20	500
Ditto	Ditto	Gas supply	20	2,000
Ditto	Ditto	Slaughter-houses	30	1,000
Burton-upon-Trent	Derby and Stafford.	Gas works	30	10,000
Ditto	Ditto	Street improvement	30	330
Ditto	Ditto	Market purposes	—	11,270
Bury St. Edmunds	Suffolk	Street improvement	30	800
Carlisle	Cumberland	Street improvement	20	3,050
Ditto	Ditto	Private street improvement	2	6,630
Carlton	Nottingham	Sewerage	30	556

District.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
				£
Charlton Kings	Gloucester	Sewerage	30	730
Chelmsford	Essex	Sewage disposal	50	3,500
Cheltenham	Gloucester	Street improvement	50	10,000
Chipping Wycombe	Buckingham	Stables and cart sheds	40	200
Chiswick	Middlesex	Private street improvement	1	2,700
Ditto	Ditto	Ditto	1	15,000
Cleator Moor	Cumberland	Hospital	30	892
Ditto	Ditto	Street improvement	30	1,434
Cockermouth	Ditto	Flagging, channelling, and kerbing	15	850
Ditto	Ditto	Sewerage	50	150
Colchester	Essex	Sewerage and sewage disposal	50	17,000
Ditto	Ditto	Water supply	50	10,000
Colne and Marsden	Lancaster	Steam road roller, stone breaker, and wagons.	10	706
Compton Gifford	Devon	Offices	30	1,000
Congleton	Chester	Water supply	30	1,000
Ditto	Ditto	Purchase of property for street improvements.	50	500
Ditto	Ditto	Street improvement	20	1,000
Conway	Carnarvon	Gas supply	30	400
Coventry	Warwick	Purchase of land for site for hospital.	30	1,150
Crompton	Lancaster	Street improvement	30	1,500
Ditto	Ditto	Offices	30	2,000
Ditto	Ditto	Ditto	10	500
Ditto	Ditto	Private street improvement	7	2,000
Croydon	Surrey	Sewage disposal	30	700
Dalton-in-Furness	Lancaster	Street improvement	30	1,000
Dartford	Kent	Sewerage	30	5,000
Derby	Derby	Sewer ventilation	30	981
Ditto	Ditto	Street improvement	20	1,670
Ditto	Ditto	Ditto	20	450
Ditto	Ditto	Purchase of land for street improvement.	60	775
Ditto	Ditto	Purposes of Ford Street depôt	30	1,500
Ditto	Ditto	Forming and improving streets	20	2,550
Devonport	Devon	Sewerage	30	4,000
Diss	Norfolk	Sewerage and sewage disposal	30	1,700
Dover	Kent	Street improvement	30	650
Ditto	Ditto	Steam road roller	10	400
Ditto	Ditto	Sewerage	30	1,100
Ditto	Ditto	Street improvement	30	200
Ditto	Ditto	Sea defences	1	350
Ditto	Ditto	Artizans and Labourers Dwellings	30	650
Dudley	Worcester	Sewerage and sewage disposal	30	10,000
Dukinfield	Chester	Private street improvement	10	4,000
Ealing	Middlesex	Sewage disposal	30	5,000
Ditto	Ditto	Street improvement	15	1,600
Ditto	Ditto	Fire-engine, fire-escape, &c.	10	700
Eastbourne	Sussex	Steam road roller	10	400
Ditto	Ditto	Sewerage and sewage disposal	30	700
Ditto	Ditto	Erection of stables	30	500
Ditto	Ditto	Laying out and planting pleasure grounds.	30	753
Ditto	Ditto	Street improvement	20	1,307
East Dereham	Norfolk	Repairing and paving market place.	20	600
Ebbw Vale	Brecknock and Monmouth.	Construction of new roads	30	3,000
Eccleshill	York	Sewerage and sewage disposal	50	2,900
Edmonton	Middlesex	Sewerage	30	415
Ditto	Ditto	Surface drainage, paving, &c.	20	18,840
Ditto	Ditto	Disinfecting apparatus, public lamps, and street repair.	20	1,135
Ditto	Ditto	Street improvement	30	4,315
Ditto	Ditto	Sewerage	30	600
Egremont	Cumberland	Hospital	30	578
Enfield	Middlesex	Sewerage	30	1,700
Ditto	Ditto	Street improvement	30	550
Ditto	Ditto	Water supply	30	6,000
Epsom	Surrey	Ditto	30	108
Ditto	Ditto	Sewage disposal	14	255
Ditto	Ditto	Sewerage	30	2,114
Erith	Kent	Purchase of land and erection of disinfecting chamber	12	590
Evesham	Worcester	Water supply	30	11,710

District.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
				£
Evesham	Worcester	Sewerage	30	288
Exeter	Devon	Alterations and additions to hospital.	15	1,735
Ditto	Ditto	Repayment of former loan	26	520
Ditto	Ditto	Water supply	—	5,460
Ditto	Ditto	Street improvement	50	3,620
Ditto	Ditto	Sewerage and street improvement	30	322
Exmouth	Ditto	Sewerage	30	4,000
Failsworth	Lancaster	Private street improvement	15	650
Finchley	Middlesex	Ditto	5	8,000
Flockton	York	Sewerage and sewage disposal	30	585
Ditto	Ditto	Ditto	21	133
Gainsborough	Lincoln	Sewerage	30	800
Glossop	Derby	Water supply	30	5,000
Great Crosby	Lancaster	Purchase of land for street improvements.	50	1,664
Ditto	Ditto	Street improvement	20	1,670
Halifax	York	Inland bonding warehouses	40	4,500
Ditto	Ditto	Shroggs park	40	6,000
Ditto	Ditto	Street improvement	20	8,065
Ditto	Ditto	Fire engine and station	10	1,000
Halstead	Essex	Offices	30	1,050
Handsworth	Stafford	Street improvement	20	1,712
Ditto	Ditto	Tar paving	10	288
Harborne	Ditto	Repayment of former loans	18	800
Ditto	Ditto	Ditto	16	1,032
Ditto	Ditto	Street improvement	20	500
Harrogate	York	Sewerage	50	550
Harrow	Middlesex	Purchase of land	40	3,250
Ditto	Ditto	Sewerage and sewage disposal	30	3,250
Harwich	Essex	Sewerage	30	750
Hastings	Sussex	Works in connexion with public pleasure grounds.	30	1,700
Ditto	Ditto	Extension of a groyne	20	500
Haworth	York	Gas purposes	40	1,620
Haydock	Lancaster	Water supply	30	4,500
Hebburn	Durham	Private street improvement	10	2,800
Ditto	Ditto	Hospital	30	1,250
Ditto	Ditto	Street improvement	30	383
Ditto	Ditto	Private street improvement	10	2,035
Hendon	Middlesex	Ditto	5	2,500
Herne Bay	Kent	Sewerage and sewage outfall	30	2,500
Ditto	Ditto	Fire engine and appliances, and engine shed.	10	300
Hereford	Hereford	Purchase of property for pleasure grounds and new street.	50	2,750
Heywood	Lancaster	Repayment of former loans	15	13,692
Ditto	Ditto	Ditto	7	8,494
Hinckley	Leicester and Warwick.	Ditto	27	7,466
Hindley	Lancaster	Street improvement	20	616
Horncastle	Lincoln	Sewerage	30	175
Ditto	Ditto	Hydrants	30	155
Ditto	Ditto	Street improvement	30	370
Hornsey	Middlesex	Sewerage	30	350
Ditto	Ditto	Private street improvement	5	13,830
Ditto	Ditto	Sewerage	30	2,519
Ditto	Ditto	Street improvement	20	8,023
Ditto	Ditto	Ditto	10	1,000
Ditto	Ditto	Steam road roller	10	400
Horsham	Sussex	Water supply	30	1,000
Ditto	Ditto	Sewerage and sewage disposal	20	2,000
Ditto	Ditto	Sewerage	30	330
Hove	Ditto	Purchase of land for site for hospital.	50	2,070
Ditto	Ditto	Ditto for depôt	50	2,000
Ditto	Ditto	Erection of groynes	20	1,200
Ditto	Ditto	Ditto town hall	—	5,000
Hucknall Torkard	Nottingham	Private street improvement	7	2,200

District.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
				£
Hyde	Chester	Sewerage and sewage disposal	30	30,000
Ditto	Ditto	Street improvement	20	5,500
Ditto	Ditto	Private street improvement	20	10,100
Ditto	Ditto	Purchase of land for site for hospital.	30	550
Idle	York	Water supply	30	2,740
Ivybridge	Devon	Repayment of former loan	20	1,777
Jarrow	Durham	Sewerage	30	385
Ditto	Ditto	Private street improvement	10	2,631
Ditto	Ditto	Making good footways	10	298
Ditto	Ditto	Establishing a steam ferry	30	7,000
Ditto	Ditto	Sewerage	30	484
Ditto	Ditto	Private street improvement	10	2,444
Kearsley	Lancaster	Sewerage and sewage disposal	30	3,000
Keighley	York	Waterworks purposes	50	10,000
Kidderminster	Worcester	Street improvement	50	20,000
King's Lynn	Norfolk	Sewerage	30	7,400
Kirkham	Lancaster	Repayment of former loan	3	610
Leyland	Lancaster	Water supply	30	7,743
Leyton	Essex	Kerbing and channelling	30	6,000
Ditto	Ditto	Culverting Wanstead ditch	30	775
Ditto	Ditto	Fire engine	10	215
Ditto	Ditto	Sewerage and sewage disposal	50	3,300
Ditto	Ditto	Ditto	30	12,700
Lillington	Warwick	Offices and other buildings	30	2,000
Littleborough	Lancaster	Sewerage and sewage disposal	30	9,150
Littlehampton	Sussex	House drainage	30	1,000
Liverpool	Lancaster	Street improvement	50	250,000
Liversedge	York	Water supply	30	2,000
Ditto	Ditto	Sewerage and sewage disposal	30	12,000
Llanelly	Carmarthen	Water supply	30	1,365
Llanfairfechan	Carnarvon	Street improvement	10	155
Long Eaton	Derby	Sewerage and sewage disposal	30	5,000
Ditto	Ditto	Lamps and lamp-posts	10	200
Loughborough	Leicester	Street improvement	20	650
Lower Brixham	Devon	Water supply	30	75
Lowestoft	Suffolk	Sewerage	30	4,000
Luddenden Foot	York	Construction of a bridge	30	500
Lymington	Hants	Water supply	30	8,120
Lymm	Chester	Sewerage and sewage disposal	30	6,586
Lytham	Lancaster	Sewerage	30	2,000
Ditto	Ditto	Private street improvement	7	2,000
Madron	Cornwall	Making a new street	30	800
Maidstone	Kent	Sewerage and sewage disposal	30	1,596
Ditto	Ditto	Street improvement	30	764
Ditto	Ditto	Site for hospital	30	900
Ditto	Ditto	Street improvement	30	500
Ditto	Ditto	Public walks or pleasure grounds	30	300
Ditto	Ditto	Hospital	30	4,000
Malton	York	Street improvement	30	2,410
Malvern	Worcester	Sewerage	30	2,000
Malvern Link	Ditto	Private street improvement	5	550
March	Cambridge	Repayment of former loan	3	150
Margate	Kent	Water supply	30	3,700
Ditto	Ditto	Street improvement	20	1,800
Ditto	Ditto	Disinfecting chamber and apparatus.	10	300
Market Harborough	Leicester and Northampton.	Drainage, sewerage, and sewage disposal.	30	3,000
Marple	Chester	Water supply	50	9,300
Ditto	Ditto	Sewerage and sewage disposal	50	10,000
Matlock	Derby	Erection of a footbridge	30	620
Meltham	York	Water supply	30	1,173
Mold	Flint	Purchase and improvement of market hall.	30	3,500

District.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
				£
Mountain Ash	Glamorgan	New road, slaughter houses, and costs of Provisional Order.	30	1,900
Ditto	Ditto	Sewerage	30	1,100
Much Woolton	Lancaster	Repayment of former loans	18	10,067
Nantwich	Chester	Clock in market hall	10	50
Ditto	Ditto	Paving, erection of stable, cart shed, &c.	20	363
Newmarket	Cambridge and Suffolk.	Sewerage and sewage disposal	30	200
Newport (I.W.)	Southampton	Water supply	30	500
Newport	Monmouth	Sewerage	30	615
Newton Heath	Lancaster	Private street improvements	5	3,000
Ditto	Ditto	Ditto	3	1,700
Ditto	Ditto	Ditto	1	1,000
Ditto	Ditto	Ditto	5	800
Ditto	Ditto	Ditto	10	2,300
Ditto	Ditto	Street improvements	20	700
Ditto	Ditto	Ditto	20	7,000
Ditto	Ditto	Ditto	20	6,000
Northam	Devon	Sewage disposal	25	200
Norwich	Norfolk	Street improvement	24	2,400
Nuneaton	Warwick	Purchase of land for sewage disposal.	50	800
Ditto	Ditto	Street improvement and culverting watercourse.	30	1,500
Ditto	Ditto	Sewerage and sewage disposal	30	700
Over Darwen	Lancaster	Hospital	30	4,000
Oxford	Oxford	Widening Magdalen Bridge	30	8,500
Paignton	Devon	Kerbing	20	860
Ditto	Ditto	Street improvement, road roller, and stone breaker.	10	940
Plymouth	Ditto	Street improvement	20	14,274
Portsmouth	Southampton	To pay off mortgages of late Commissioners.	30	11,000
Ditto	Ditto	Private street improvement	5	7,400
Prestwich	Lancaster	Street improvement	20	600
Ditto	Ditto	Private street improvement	5	1,800
Ditto	Ditto	Sewage disposal	30	2,200
Radcliffe	Lancaster	Street improvement	20	6,000
Ditto	Ditto	Private street improvement	15	3,800
Ditto	Ditto	Ditto	15	4,300
Ramsgate	Kent	Purchase of property for street improvements.	50	13,700
Ditto	Ditto	Street improvement, urinal, and road roller.	20	1,800
Ditto	Ditto	Purchase of property for street improvements.	5	2,000
Ditto	Ditto	Repayment of former loan	15	2,000
Redditch	Warwick and Worcester.	Sewerage	20	2,096
Ditto	Ditto	Hydrants	20	200
Ditto	Ditto	Street improvement	20	6,204
Reigate	Surrey	Sewerage	30	5,000
Rhyl	Denbigh & Flint	Erection of a bridge	—	1,800
Ditto	Ditto	Extending the parades	—	278
Rochdale	Lancaster	Purposes of waterworks undertaking.	—	60,000
Rochester	Kent	Waterworks purposes	—	3,500
Royal Leamington Spa.	Warwick	Offices	30	20,000
Rugby	Ditto	Water supply	30	123
Ditto	Ditto	Sewerage	30	264
Ditto	Ditto	Surface drainage	30	2,867
Ditto	Ditto	Street improvement	20	1,636
Ryde	Southampton	Additions and alterations to town hall, &c.	30	500
Ditto	Ditto	Water supply	30	1,000
Ditto	Ditto	Sewerage and sewer ventilation	30	2,160
Ryton	Durham	Water supply	30	2,000

District.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
				£
St. Helens (I. W.)	Southampton	Water supply	30	430
Ditto	Ditto	Street improvement	20	1,470
St. Helens	Lancaster	Ditto	20	2,896
Ditto	Ditto	Ditto	30	1,000
Ditto	Ditto	Ditto	20	1,700
St. Ives	Cornwall	Purchase of water mill	20	320
St. Thomas the Apostle.	Devon	Water supply	30	600
Salford	Lancaster	Gasworks purposes	—	96,400
Saltley	Warwick	Sewerage	30	4,500
Sandal Magna	York	Sewerage and sewage disposal	50	627
Ditto	Ditto	Ditto	30	5,644
Sandown (I. W.)	Southampton	Repayment of former loan	16	270
Seaton	Devon	Street improvement	30	162
Selby	York	Sewerage	30	450
Ditto	Ditto	Water supply	30	60
Ditto	Ditto	Street improvement	30	300
Sevenoaks	Kent	Sewerage	30	6,700
Sheffield	York	Fire Brigade station	30	8,500
Shirley and Freemantle.	Southampton	Street improvement and lighting	20	1,000
Shrewsbury	Salop	Street improvement	15	10,000
Skelmanthorpe	York	Water supply	30	5,000
Smethwick	Stafford	Gas supply	—	50,000
Southampton	Southampton	Street improvement	20	9,073
Ditto	Ditto	Ditto	40	245
Ditto	Ditto	Water supply	30	150
Ditto	Ditto	Street improvement	20	1,075
Ditto	Ditto	Steam fire engine	10	600
Ditto	Ditto	Repayment of former loan	34	7,440
Ditto	Ditto	Cottage at sewage farm	20	150
Southend	Essex	Sewerage	30	250
Ditto	Ditto	Private street improvement	10	2,610
Southgate	Middlesex	Liabilities of Edmonton Local Board, apportioned.	30	2,200
Ditto	Ditto	Ditto	5	1,492
Ditto	Ditto	Costs of obtaining Local Act	—	4,064
South Hornsey	Ditto	Private street improvement	10	6,000
Southport	Lancaster	Completion of promenade	30	10,000
South Shields	Durham	Street improvement	20	1,090
South Stockton	Durham and York	Sewerage	30	580
Ditto	Ditto	Paving	20	420
Ditto	Ditto	Private street improvement	12	5,000
Ditto	Ditto	Sewerage and sewer ventilation	30	500
Southwick	Durham	Private street improvement	10	2,500
Stafford	Stafford	Purposes of gas undertaking	—	10,000
Stocksbridge	York	Water supply	30	600
Stockton	Durham	Sewerage and sewage disposal	30	10,738
Stratford-upon-Avon	Warwick	Purchase of land for sewage disposal.	50	4,500
Stretford	Lancaster	Sewerage and sewage disposal	30	19,500
Stroud	Gloucester	Sewerage	30	250
Ditto	Ditto	Water supply	30	2,500
Sunderland	Durham	Street improvement	20	1,786
Ditto	Ditto	Private street improvement	10	7,815
Ditto	Ditto	Market purposes	30	4,500
Swindon, New Town	Wilts	Sewerage	30	6,170
Swinton	York	Water supply	30	10,700
Tamworth	Stafford and Warwick.	Water supply	30	998
Taunton	Somerset	Sewerage	30	200
Ditto	Ditto	Water supply	30	10,500
Teignmouth	Devon	Sewerage	30	100
Tiverton	Ditto	Street improvement	30	500
Todmorden	Lancaster and York.	Steam road roller and tender	10	500
Tonbridge	Kent	Free library and offices	50	2,000
Ditto	Ditto	Ditto	10	500
Torquay	Devon	Water supply	30	8,350
Tottenham	Middlesex	Ditto	30	5,820
Ditto	Ditto	Lamp posts	30	325
Ditto	Ditto	Paving	20	4,524
Ditto	Ditto	Widening a street	20	200
Ditto	Ditto	Private street improvement	10	500
Ditto	Ditto	Water supply	30	4,656
Ditto	Ditto	Paving	20	4,620
Toxteth Park	Lancaster	Street improvement	20	300
Turton	Ditto	Private street improvement	7	1,000

District.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
				£
Twickenham	Middlesex	Sewerage	30	5,237
Tyldesley with Shakerley.	Lancaster	Street improvement	20	1,300
Tynemouth	Northumberland	Purchase of land for street improvement.	50	1,715
Ditto	Ditto	Street improvements	30	8,328
Ditto	Ditto	Water supply	30	1,000
Ulverston	Lancaster	Sewerage	30	2,800
Ventnor (I. W.)	Southampton	Mortuary	30	115
Ditto	Ditto	Street improvement	30	125
Ditto	Ditto	Construction of groynes	15	250
Ditto	Ditto	Tar paving	15	581
Ditto	Ditto	Repayment of former loans	50	5,000
Wakefield	York	Alterations at hospital	30	1,200
Wallasey	Chester	Gas purposes	30	10,200
Ditto	Ditto	Private street improvement	5	8,660
Walmer	Kent	Sewerage	30	120
Ditto	Ditto	Street improvement	30	900
Walsall	Stafford	Sewerage and sewage disposal	50	30,000
Ditto	Ditto	Ditto	30	7,000
Ditto	Ditto	Stone yard and depôt	30	1,820
Walthamstow	Essex	Private street improvement	5	1,121
Ditto	Ditto	Ditto	5	7,377
Ditto	Ditto	Sewerage and sewage disposal	30	1,054
Waltham Holy Cross	Ditto	Purchase of land	50	3,000
Ditto	Ditto	Sewage disposal	30	2,000
Walton-le-Dale	Lancaster	Water supply	30	2,000
Walton-on-the-Hill	Ditto	Street widening	40	10,070
Ditto	Ditto	Ditto	3	6,000
Ditto	Ditto	Sewerage	30	231
Ditto	Ditto	Street improvement	15	1,266
Wanstead	Essex	Purchase of land	50	3,000
Ditto	Ditto	Sewerage and sewage disposal	30	17,000
Wantage	Berks	Ditto	30	7,150
Warminster	Wilts	Ditto	25	3,000
Waterloo-with-Seaforth.	Lancaster	Sewerage	30	312
Ditto	Ditto	Street improvement	20	788
Watford	Hertford	Sewage disposal	30	10,000
Wavertree	Lancaster	Paving	30	2,000
Wednesbury	Stafford	Street improvement	30	2,000
Wellington	Salop	Purchase of waterworks	30	12,000
Wells	Somerset	Purchase of land	50	1,400
Ditto	Ditto	Sewage disposal	30	3,600
West Cowes (I. W.)	Southampton	Water supply	10	94
Ditto	Ditto	Sewerage	30	408
Ditto	Ditto	Street improvement	30	50
West Derby	Lancaster	Extending and furnishing offices	30	1,000
Ditto	Ditto	Ditto	10	300
Ditto	Ditto	Street improvement	20	4,550
West Hartlepool	Durham	Ditto	30	300
Ditto	Ditto	Sewerage	50	800
Ditto	Ditto	Enclosing and draining land for public pleasure grounds.	30	1,200
Weston-super-Mare	Somerset	Purchase and laying out lands as public pleasure grounds.	30	24,000
Whitehaven	Cumberland	Sewerage	—	1,600
Ditto	Ditto	Street improvement	3	1,500
Ditto	Ditto	Building a bridge and improving a road.	30	300
Whitwood	Lancaster	Sewerage	30	2,946
Ditto	Ditto	Water supply	30	4,054
Wigan	Ditto	Gas purposes	—	17,500
Wigton	Cumberland	Sewerage and sewage disposal	30	6,700
Willesden	Middlesex	Private street improvement	5	2,275
Ditto	Ditto	Ditto	5	462
Ditto	Ditto	Street improvement	5	565
Wimbledon	Surrey	Private street improvement	5	1,120
Windsor	Berks	Sewerage and sewage disposal	30	4,000
Winsford	Chester	Ditto	30	2,000
Ditto	Ditto	Water supply	30	400
Ditto	Ditto	Purchase of land for a wharf	20	640

District.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
				£
Wombwell	York	Sewerage and sewage disposal	30	5,661
Woodford	Essex	Private street improvement	2	500
Worcester	Worcester	Water supply	30	320
Ditto	Ditto	Street improvement	30	380
Ditto	Ditto	Purchase of land for water supply	30	1,400
Workington	Cumberland	Paving and flagging	20	1,000
Worksop	Nottingham	Sewerage and sewage disposal	30	2,500
Worsborough	York	Ditto	30	450
Ditto	Ditto	Sewerage	20	200
Worthing	Sussex	Water supply	30	1,600
Ditto	Ditto	Sewerage	30	500
Ditto	Ditto	Obtaining sea water for street watering.	30	1,400
Ynyscynhaiarn	Carnarvon	Gas supply	30	2,000
Ditto	Ditto	Sewerage and sewage disposal	30	2,117
York	York	Purposes of York (Skeldergate Bridge) Act.	—	15,000
Ditto	Ditto	Street improvement	30	527
Ditto	Ditto	Improvement of public walks	20	3,100
Ditto	Ditto	Sewerage	30	3,130
Ditto	Ditto	Street improvement	30	5,401
Ditto	Ditto	Town depôt	30	2,946
Ditto	Ditto	Paving	20	4,452
Ditto	Ditto	Fire-engine	10	996
				2,169,296

Loans sanctioned by the Board to Urban Sanitary Authorities under the Public Health (Interments) Act, 1879, during the Year ended with 31st December 1882.

Place.	County.	Purpose.	Number of Years.	Sum.
				£
Astley Bridge	Lancaster	Cemetery	50	3,340
Ditto	Ditto	Ditto	30	6,743
Broseley	Salop	Cemetery	30	1,400
Chipping Norton	Oxford	Ditto	10	200
Edmonton	Middlesex	Purchase of land for burial ground	50	8,500
Hove	Sussex	Cemetery	30	2,000
Long Eaton	Derby	Ditto	50	4,500
Newtown and Llanllwchaiarn.	Montgomery	Lodge and boundary wall, fencing and laying out cemetery.	30	1,802
North Bierley	York	Cemetery	30	1,300
Ryton	Durham	Ditto	30	3,500
Stretford	Lancaster	Purchase of land for cemetery	50	2,500
Willington	Durham	Cemetery	15	1,000
Ditto	Ditto	Ditto	15	300
				37,085

No. 105.

LOANS sanctioned by the BOARD to RURAL SANITARY AUTHORITIES during the Year ended with 31st December 1882.

Place.	Union.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
					£
Alsager	Congleton	Chester	Water supply	30	2,000
Ditto	Ditto	Ditto	Ditto	30	300
Alveley	Bridgnorth	Salop	Ditto	30	400
Amington and Stonydelph.	Tamworth	Warwick	Ditto	30	119
Anderton	Northwich	Chester	Ditto	30	450
Arnside	Kendal	Westmoreland	Ditto	30	500
Ashborne	Newton Abbot	Devon	Sewerage	30	100
Ashton-upon-Mersey.	Altrincham	Chester	Ditto	30	1,648
Atherstone	Atherstone	Warwick	Water supply	30	6,600
Axminster	Axminster	Dorset	Ditto	30	1,000
Balby-with-Hexthorpe.	Doncaster	York	Sewerage and sewage disposal.	30	4,500
Bangor	Bangor and Beaumaris.	Carnarvon	Sewerage	30	250
Barnoldswick	Skipton	York	Sewerage and sewage disposal.	30	4,000
Barnton	Northwich	Chester	Water supply	30	1,450
Barwick-in-Elmet	Tadcaster	York	Ditto	30	500
Beddington	Croydon	Surrey	Sewerage and sewage disposal.	40	667
Ditto	Ditto	Ditto	Sewerage and drainage	40	1,220
Bentham	Settle	York	Sewerage and sewage disposal.	30	2,000
Bolehall and Glascote.	Tamworth	Warwick	Water supply	30	1,024
Carnforth	Lancaster	Lancaster	Sewerage	30	700
Castle Acre	Freebridge, Lynn.	Norfolk	Ditto	30	400
Chard	Chard	Somerset	Ditto	30	2,200
Chesterton	Wolstanton and Burslem.	Stafford	Sewerage and sewage disposal.	30	1,700
Chislehurst	Bromley	Kent	Sewerage	50	18,000
Chorlton	Nantwich	Chester	Water supply	20	150
Chudleigh	Newton Abbot	Devon	Ditto	30	120
Church Coppenhall	Nantwich	Chester	Ditto	30	700
Church Gresley	Burton-on-Trent.	Derby	Ditto	30	1,157
Craster	Alnwick	Northumberland.	Ditto	30	236
Denby	Newton Abbot	Devon	Water supply	30	300
Distington	Whitehaven	Cumberland	Ditto	30	525
Dunstan	Alnwick	Northumberland.	Ditto	30	254
Earsdon	Tynemouth	Northumberland.	Water supply	30	600
East Ardsley	Wakefield	York	Ditto	30	2,665
East Grinstead	East Grinstead	Sussex	Sewerage and sewage disposal.	30	1,630
Ellel	Lancaster	Lancaster	Sewerage	30	1,500
Embleton	Alnwick	Northumberland.	Sewerage and sewage disposal.	30	150

Place.	Union.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
					£
Fazeley	Tamworth	Warwick	Water supply	30	498
Foots Cray	Bromley	Kent	Lamps	10	210
Ford	Sunderland	Durham	Private street improvement.	10	550
Frimley	Farnham	Surrey	Sewerage and sewage disposal.	30	5,000
Frodsham Lordship	Runcorn	Chester	Ditto	30	598
Fulwell	Sunderland	Durham	Sewerage	30	350
Giggleswick	Settle	York	Water supply	30	750
Hanwell	Brentford	Middlesex	Purchase of land for sewage disposal.	30	4,000
Ditto	Ditto	Ditto	Sewerage and sewage disposal.	30	11,000
Harrington	Whitehaven	Cumberland	Water supply	30	1,575
Harrow-on-the-Hill.	Hendon	Middlesex	Sewerage	30	400
Ditto	Ditto	Ditto	Sewerage and sewage disposal.	30	15,000
Hasland	Chesterfield	Derby	Sewerage	30	500
Hawes	Aysgarth	York	Sewerage and sewage disposal.	30	600
Holdenhurst	Christchurch	Southampton	Sewerage	30	4,280
Hoylake	Wirral	Chester	Ditto	30	120
Ditto	Ditto	Ditto	Private street improvement.	10	876
Hurstpierpoint	Cuckfield	Sussex	Purchase of land for sewage disposal.	50	2,200
Ingleton	Settle	York	Sewerage and sewage disposal, and costs of Provisional Order.	30	750
Kimbolton	St. Neots	Huntingdon	Sewerage and sewage disposal.	30	450
Kirkby-in-Ashfield	Basford	Nottingham	Ditto	30	4,500
Leighton	Nantwich	Chester	Water supply		
Leintwardine	Ludlow	Hereford	Ditto	30	1,380
Ditto	Ditto	Ditto	Ditto	30	93
Llandrillo-yn-Rhos	Conway	Denbigh	Subway under railway	30	187
Ditto	Ditto	Ditto	Sewerage	30	1,500
Llandysilio	Bangor and Beaumaris.	Carnarvon	Water supply	30	150
				30	3,800
Marston	Northwich	Chester	Water supply	30	1,400
Meole Brace	Atcham	Salop	Ditto	30	1,300
Merton	Croydon	Surrey	Sewerage and sewage disposal.	40	598
Ditto	Ditto	Ditto	Ditto	40	828
Merton Rush	Ditto	Ditto	Ditto	40	128
Ditto	Ditto	Ditto	Ditto	40	515
Minshull Vernon	Nantwich	Chester	Water supply	30	720
Mitcham	Croydon	Surrey	Sewerage and sewage disposal.	40	1,499
Ditto	Ditto	Ditto	Ditto	40	3,886
Morden	Ditto	Ditto	Ditto	40	281
Ditto	Ditto	Ditto	Ditto	40	261
Mount Charles and Charlestown.	St. Austell	Cornwall	Water supply	30	200
Much Hadham	Bishop Stortford.	Hertford	Sewerage and sewage disposal.	30	374
Mylor	Falmouth	Cornwall	Water supply	30	120
Newton	Prestwich	Lancaster	Flagging, kerbing, and channelling private streets.	10	4,000
Oddington	Stow-on-the-Wold.	Gloucester	Water supply	10	300

Place.	Union.	County.	Purpose of Loan authorised.	Number of Years.	Sum.
					£
Pinner	Hendon	Middlesex	Sewerage and sewage disposal.	30	2,000
St. Bees	Whitehaven	Cumberland	Sewerage	30	1,700
Ditto	Ditto	Ditto	Water supply	30	2,600
St. Leonard	Hastings	Sussex	Ditto	20	300
St. Mary-in-the-Castle.	Ditto	Ditto	Ditto	20	200
Settle	Settle	York	Ditto	30	2,250
Silverdale	Wolstanton and Burslem.	Stafford	Sewerage and sewage disposal.	30	1,500
Somerton	Langport	Somerset	Ditto	30	300
Stapeley	Nantwich	Chester	Water supply	30	600
Tamworth Castle	Tamworth	Warwick	Water supply	30	102
Thatcham	Newbury	Berks	Sewerage and sewage disposal.	30	150
Wallington	Croydon	Surrey	Sewerage and sewage disposal.	40	827
Ditto	Ditto	Ditto	Ditto	40	1,790
Warkworth	Alnwick	Northumberland.	Water supply	20	320
Warmingham	Nantwich	Chester	Ditto	20	135
Wem	Wem	Salop	Ditto	30	250
West Ardsley	Wakefield	York	Ditto	30	2,665
West Kirby	Wirral	Chester	Sewerage	30	140
Ditto	Ditto	Ditto	Ditto	30	120
Ditto	Ditto	Ditto	Private street improvement.	10	514
Whitehaven Union	Whitehaven	Cumberland	Hospital	30	1,540
Wigginton	Tamworth	Warwick	Water supply	30	425
Wilnecote	Ditto	Ditto	Ditto	30	584
Wincham	Northwich	Chester	Ditto	30	1,600
Witheridge	Southmolton	Devon	Ditto	30	400
Wolstanton	Wolstanton and Burslem.	Stafford	Sewerage and sewage disposal.	30	1,400
Wolstanwood	Nantwich	Chester	Water supply	30	500
Worsley	Barton-on-Irwell.	Lancaster	Private street improvement.	10	3,700
Ditto	Ditto	Ditto	Sewerage and sewage disposal.	30	3,000
Yardley	Solihull	Worcester	Sewerage	30	1,000
			Total		£ 172,054

Loans sanctioned by the Board to Rural Sanitary Authorities under the Public Health (Interments) Act, 1879, during the Year ended with 31st December 1882.

Place.	Union.	County.	Number of Years.	Sum.
				£
Ardsley	Barnsley	York	30	3,450
Brampton	Huntingdon	Huntingdon	30	700
Cawood	Selby	York	30	413
Collyweston	Stamford	Northampton	30	220
Hasland	Chesterfield	Derby	30	1,000
Mareham-le-Fen	Horncastle	Lincoln	30	450
Ruddington	Basford	Nottingham	30	400
Ryhall	Stamford	Rutland	30	220
				£6,853

LOAN sanctioned by the BOARD to URBAN SANITARY AUTHORITIES, under the ARTIZANS' and LABOURERS' DWELLINGS ACTS, during the Year ended with 31st December 1882.

District.	County.	Number of Years.	Sum.
			£
Birmingham - -	Warwick - - -	60	100,000

LOANS sanctioned by the BOARD under the BATHS and WASH-HOUSES ACTS, during the Year ended with 31st December 1882.

District.	County.	Purpose of Loan.	Number of Years.	Sum.
				£
Birmingham - -	Warwick -	Baths and wash-houses -	25	900
Kendal - - -	Westmoreland	Ditto - -	30	5,000
Portsmouth - -	Southampton	Public baths - - -	30	4,000
Redditch - - -	Warwick and Worcester.	Public swimming bath -	20	500
Rotherhithe - -	Surrey - -	Baths and wash-houses -	30	3,000
York - - - -	York - -	Public baths - - -	30	3,000
Ditto - - - -	Ditto - -	Ditto - - - -	30	3,000
				£19,400

LOANS sanctioned by the BOARD to JOINT SEWERAGE BOARDS and UNITED BOARDS during the Year ended with 31st December 1882.

Name of Joint Board.	Purpose of Loan.	Number of Years.	Sum.
			£
Birmingham, Tame and Rea District Drainage Board.	Purchase of land - - -	60	16,250
Ditto ditto -	Sewage disposal - - - -	30	3,500
Bromley and Beckenham Joint Hospital Board.	Hospital - - - - -	50	600
Darenth Valley Main Sewerage Board.	Sewerage - - - - -	50	10,000
Ditto ditto -	Ditto - - - - -	50	30,000
Rochester and Chatham Joint Hospital Board.	Purchase of land and erection of hospital.	30	5,000
Ditto ditto -	Ditto ditto -	30	1,000
			£66,350

No. 106.

LOANS recommended by the BOARD to be advanced by the PUBLIC WORKS LOAN COMMISSIONERS to URBAN SANITARY AUTHORITIES under Section 243 of the Public Health Act, 1875, during the Year ended with the 31st December 1882.

Date.	Place.	Amount.	Rate per Cent.	Number of Years.	Purpose.
1882.		£			
2 Jan.	Stocksbridge - - -	600	3½	30	Water supply.
7 „	Ashford - - - -	10,722	3½	30	Purchase of water undertaking.
3 „	Southborough - -	840	3½	30	Sewerage and sewage disposal.
10 „	Marple - - - -	10,000	4½	50	Ditto.
10 „	Ditto - - -	9,300	4½	50	Water supply.
13 „	Walmer - - - -	120	3½	30	Sewerage.
13 „	Brampton and Walton	2,150	3½	30	Sewerage and sewage disposal.
13 „	Ditto - - -	1,669	3½	30	Ditto.
11 „	Bromley - - - -	1,500	4½	50	Sewerage.
11 „	Hendon - - - -	1,100	3½	30	Ditto.
11 „	Ditto - - - -	400	3½	3	Ditto.
16 „	Reigate - - - -	5,000	3½	30	Ditto.
19 „	Ealing - - - -	2,500	3½	30	Purchase of land for ewage disposal.
30 „	Soothill, Upper - -	698	3½	30	Water supply.
16 Feb.	Blaydon - - - -	6,000	3½	30	Sewerage.
6 Mar.	Colchester - - -	17,000	4½	50	Ditto.
9 „	Burley - - - -	1,400	3½	30	Water supply.
18 „	Torquay - - - -	8,350	3½	30	Ditto.
18 „	Aston Manor - -	230	3½	20	Disinfecting apparatus.
24 „	Eccleshill - - -	2,900	4½	50	Sewerage and sewage disposal.
25 „	Wigton - - - -	6,700	3½	30	Ditto.
27 „	Diss - - - -	1,700	3½	30	Ditto.
11 April	Walthamstow - -	1,054	3½	30	Ditto.
13 „	Hastings - - -	984	3½	26	Water supply.
14 „	Windsor - - - -	4,000	3½	30	Sewerage and sewage disposal.
27 May	Dartford - - - -	5,000	3½	30	Sewerage.
27 „	Lowestoft - - -	4,000	3½	30	Ditto.
29 „	Colchester - - -	10,000	4½	50	Water supply.
1 „	Saltley - - - -	4,500	3½	30	Sewerage.
4 „	Littleborough - -	9,150	3½	30	Sewerage and sewage disposal.
8 „	Ashford - - - -	2,700	4½	50	Ditto.
8 „	Ditto - - - -	12,800	3½	30	Ditto.
8 „	Ditto - - - -	4,278	3½	30	Water supply.
13 „	Kings Lynn - - -	4,700	3½	30	Sewerage.

Date.	Place.	Amount.	Rate per Cent.	Number of Years.	Purpose.
1882.		£			
23 May	Devizes	700	3½	30	Water supply.
26 „	Horsham	2,000	3½	20	Sewerage and sewage disposal.
26 „	Ditto	1,000	3½	30	Water supply.
25 „	Walsall	30,000	4½	50	Sewerage and sewage disposal.
25 „	Ditto	7,000	3½	30	Ditto.
31 „	Bournemouth	650	3½	30	Expenses in connexion with sewerage works.
2 June	Littlehampton	1,000	3½	30	House drainage.
7 „	Brentford	2,000	3½	30	Purchase of land for sewage disposal.
7 „	Ditto	28,000	3½	30	Sewerage and sewage disposal.
7 „	Beeston	8,700	3½	30	Ditto.
16 „	Audenshaw	3,300	4½	50	Purchase of land for sewage disposal.
26 „	Wanstead	17,000	3½	30	Sewerage and sewage disposal.
26 „	Ditto	3,000	4½	50	Purchase of land.
23 „	Whitwood	2,946	3½	30	Sewerage.
23 „	Bradford (Wilts)	5,490	3½	30	Water supply.
26 „	Tamworth	998	3½	30	Ditto.
29 „	Bishop Stortford	200	3½	20	Hospital.
5 July	Tottenham	5,820	3½	30	Reservoir and tower tank.
8 „	Ashford	550	3½	30	Purchase of land for water supply.
10 „	Enfield	1,700	3½	30	Sewerage.
11 „	Swinton	10,700	3½	30	Water supply.
22 „	Littlehampton	1,000	3½	30	Ditto.
25 „	Stockton	10,738	3½	30	Sewerage and sewage disposal.
26 „	Bournemouth	1,400	3½	30	Purchase of land for site for hospital.
1 Aug.	Whitwood	4,054	3½	30	Water supply.
1 „	Winsford	2,000	3½	30	Sewerage and sewage disposal.
1 „	Ditto	400	3½	30	Water supply.
4 „	Walton-le-Dale	2,000	3½	30	Ditto.
5 „	Twickenham	5,237	3½	30	Sewerage.
23 „	Sandal Magna	627	4½	50	Sewerage and sewage disposal.
23 „	Ditto	5,644	3½	30	Ditto.
24 „	Edmonton	415	3½	30	Sewerage.
24 „	Ditto	600	3½	30	Ditto.
30 „	Mountain Ash	1,100	3½	30	Ditto.
25 „	Haydock	4,500	3½	30	Water supply.
31 „	Warminster	3,000	3½	25	Sewerage and sewage disposal.
31 „	Leyton	775	3½	30	Culverting Wanstead Ditch.
31 „	Ditto	12,700	3½	30	Sewerage and sewage disposal.
2 Sept.	Worsbrough	450	3½	30	Ditto.
2 „	Ditto	200	3½	20	Ditto.
4 „	Ealing	5,000	3½	30	Sewage disposal.
5 „	Lymington	8,125	3½	30	Water supply.
8 „	Swinton	300	3½	30	Ditto.

Date.	Place.	Amount.	Rate per Cent.	Number of Years.	Purpose.
1882.		£			
12 Sept.	Wombwell - - -	5,661	3¼	30	Sewerage and sewage disposal.
19 „	Bournemouth - -	1,420	3½	30	Sewerage.
23 „	Leyland - - - -	7,743	3½	30	Water Supply.
28 „	Buglawton - - -	250	3½	30	Ditto.
28 „	Bromsgrove - - -	2,325	3½	30	Sewerage.
18 Oct.	Abram - - - -	6,000	3½	30	Water supply.
19 „	Dudley - - - -	10,000	3½	30	Sewerage and sewage disposal.
26 „	Harwich - - - -	750	3½	30	Sewerage.
9 Nov.	Epsom - - - -	255	3½	14	Sewage disposal.
9 „	Ditto - - -	2,114	3½	30	Sewerage.
9 „	Ditto - - -	108	3½	30	Water supply.
13 „	Newmarket - - -	200	3½	30	Sewerage and sewage disposal.
15 „	Prestwich - - -	2,200	3½	30	Sewage disposal.
22 „	Evesham - - -	11,710	3½	30	Water supply.
22 „	Ditto - - -	288	3½	30	Sewerage.
23 „	Ynyscynhaiarn - -	2,117	3½	30	Sewerage and sewage disposal.
29 „	Ryton - - - -	2,000	3½	30	Water supply.
1 Dec.	Lymm - - - -	6,586	3½	30	Sewerage and sewage disposal.
11 „	Harrow - - - -	3,250	3½	30	Ditto.
11 „	Ditto - - - -	3,250	4	40	Purchase of land for sewage disposal.
6 „	Charlton Kings - -	730	3½	30	Sewerage.
9 „	Carlton - - - -	550	3½	30	Ditto.
13 „	Wantage - - -	7,150	3½	30	Sewerage and sewage disposal.
13 „	Wells - - - -	1,400	4½	50	Purchase of land.
13 „	Ditto - - - -	3,600	3½	30	Sewage disposal.
14 „	Croydon - - - -	700	3½	30	Ditto.
14 „	Prestwich - - -	700	3½	30	Sewerage.
18 „	Wellington (Salop) -	12,000	3½	30	Purchase of waterworks undertaking.
29 „	Beeston - - - -	4,000	3½	30	Sewerage.
22 „	Market Harborough, &c.	3,000	3½	30	Drainage, sewerage, and sewage disposal.
26 „	Taunton - - - -	10,500	3½	30	Water supply.
26 „	Ditto - - - -	200	3½	30	Sewerage.
29 „	Waltham Holy Cross -	3,000	4½	50	Purchase of land.
29 „	Ditto - - -	2,000	3½	30	Sewage disposal.
		474,821			

No. 107.

LOANS recommended by the BOARD to be advanced by the PUBLIC WORKS LOAN COMMISSIONERS to RURAL SANITARY AUTHORITIES under Section 243 of the Public Health Act, 1875, during the Year ended with the 31st December 1882.

Date.	Place.	Union.	Amount.	Rate per Cent.	No. of Years.	Purpose.
1882.			£			
20 Jan.	Chislehurst - -	Bromley -	18,000	4½	50	Sewerage.
26 „	Somerton - -	Langport -	300	3¾	30	Sewerage and sewage disposal.
6 Feb.	Ingleton - - -	Settle - -	750	3½	30	Ditto.
3 „	Harrow-on-the-Hill	Hendon - -	807	3½	27	Sewerage.
16 „	Alsager - -	Congleton -	300	3½	30	Water supply.
16 „	Scotforth - - -	Lancaster -	700	3¾	30	Ditto.
2 Mar.	Llandysilio - -	Bangor and Beaumaris.	3,065	3½	30	Sewerage.
2 „	Ditto - - -	Ditto -	3,800	3¾	30	Water supply.
2 „	Bangor - - -	Ditto -	500	3½	30	Sewerage.
6 „	Stapeley - - -	Nantwich -	600	3¾	30	Water supply.
17 „	Chesterton - -	Wolstanton and Burslem.	1,700	3¾	30	Sewerage and sewage disposal.
17 „	Wolstanton - -	Ditto -	1,400	3¾	30	Ditto.
18 „	Meole Brace - -	Atcham - -	1,300	3½	30	Water supply.
29 „	Kimbolton - -	St. Neots -	450	3½	30	Sewage disposal.
29 „	Kingswear - -	Totnes - -	550	4½	50	Water supply.
31 „	Barnoldswick - -	Skipton - -	4,000	3½	30	Sewerage and sewage disposal.
15 Apr.	Chudleigh - -	Newton Abbot	120	3½	30	Water supply.
20 „	Silverdale - -	Wolstanton and Burslem.	1,500	3½	30	Sewerage and sewage disposal.
28 „	Beddington - -	Croydon -	667	4	40	Ditto.
28 „	Mitcham - - -	Ditto -	1,499	4	40	Ditto.
28 „	Merton - - -	Ditto -	598	4	40	Ditto.
28 „	Merton Rush - -	Ditto -	128	4	40	Ditto.
28 „	Morden - - -	Ditto -	281	4	40	Ditto.
28 „	Wallington - -	Ditto -	827	4	40	Ditto.
25 „	Llandrillo-yn-Rhos	Conway - -	150	3½	30	Sewerage.
27 May	Fulwell - - -	Sunderland -	350	3½	30	Ditto.
28 „	Hasland - - -	Chesterfield -	500	3½	30	Ditto.
17 „	Leintwardine - -	Ludlow - -	93	3½	30	Water supply.
17 „	Leintwardine, North Side.	Ditto -	187	3½	30	Ditto.
19 „	Beddington - -	Croydon -	1,220	4	40	Sewerage and drainage.
19 „	Merton - - -	Ditto -	828	4	40	Ditto.
19 „	Merton Rush - -	Ditto -	515	4	40	Ditto.
19 „	Mitcham - - -	Ditto -	3,886	4	40	Ditto.
19 „	Morden - - -	Ditto -	261	4	40	Ditto.
19 „	Wallington - -	Ditto -	1,790	4	40	Ditto.
26 „	East Grinstead -	East Grinstead	1,630	3½	30	Sewerage and sewage disposal.
27 „	Ellenborough and Ewanrigg.	Cockermouth	315	3½	30	Water supply.
27 „	Ditto - - -	Ditto -	81	3½	30	Sewerage.
27 „	Llangollen Traian -	Corwen - -	1,300	3½	30	Water supply.

Date.	Place.	Union.	Amount.	Rate per Cent.	No. of Years.	Purpose.
1882.			£			
31 May	Worsley - - -	Barton-on-Irwell.	3,000	3½	30	Sewerage and sewage disposal.
31 „	Kirkby-in-Ashfield -	Basford - -	4,500	3½	30	Ditto.
2 June	Settle - - -	Settle - -	2,250	3½	30	Water supply.
2 „	Giggleswick - -	Ditto -	750	3½	30	
10 „	Atherstone - -	Atherstone -	6,800	3½	30	Water supply.
12 „	Castle Acre - -	Freebridge Lynn.	400	3½	30	Sewerage.
26 „	Thatcham - -	Newbury -	150	3½	28	Sewerage and sewage disposal.
26 „	Ellel - - -	Lancaster -	1,500	3½	30	Sewerage.
23 „	Witheridge - -	Southmolton -	400	3½	30	Water supply.
26 „	Pennington - -	Ulverstone -	330	3½	30	Sewerage and sewage disposal.
26 „	Amington and Stonydelph.	Yarmouth -	119	3½	30	Water supply.
26 „	Bolehall and Glascote.	Ditto -	1,024	3½	30	Ditto.
26 „	Fazeley - - -	Ditto -	498	3½	30	Ditto.
26 „	Wiggington - -	Ditto -	425	3½	30	Ditto.
26 „	Wilnecote - -	Ditto -	583	3½	30	Ditto.
26 „	Tamworth Castle -	Ditto -	102	3½	30	Ditto.
28 „	Axminster - -	Axminster -	1,000	3½	30	Ditto.
3 July	Pinner - - -	Hendon - -	2,000	3½	30	Sewerage.
17 „	Ashton-upon-Mersey	Altrincham -	1,648	3½	30	Ditto.
18 „	Harrow - - -	Hendon - -	400	3½	30	Ditto.
20 „	Chorlton - - -	Nantwich -	150	3½	20	Water Supply.
20 „	Balby-with-Hexthorpe.	Doncaster -	4,500	3½	30	Sewerage.
24 „	Norham - - -	Berwick-on-Tweed.	800	3½	30	Water supply.
29 „	Yardley - - -	Solihull - -	1,000	3½	30	Sewerage.
1 Aug.	Frodsham - -	Runcorn -	598	3½	30	Sewerage and sewage disposal.
17 „	Harrow-on-the-Hill	Hendon - -	15,000	3½	30	Ditto.
17 „	Holdenhurst - -	Chislehurst -	4,280	3½	30	Sewerage.
17 „	Hawes - - -	Aysgarth -	600	3½	30	Sewerage and sewage disposal.
24 „	Wateringbury -	Malling - -	1,000	3½	30	Ditto.
25 „	Church Gresley -	Burton-upon-Trent.	1,157	3½	30	Water supply.
25 „	Bentham - - -	Settle - -	2,000	3½	30	Sewerage and sewage disposal.
31 „	Wem - - -	Wem - -	250	3½	30	Water supply.
4 Sept.	Frimley - - -	Farnham -	5,000	3½	30	Sewerage and sewage disposal.
4 „	Alveley - - -	Bridgnorth -	400	3½	30	Water supply.
8 „	Maker - - -	St. Germans -	500	3½	30	Sewerage and water supply.
11 „	Marston - - -	Northwich -	1,400	3½	30	Water supply.
11 „	Wincham - -	Ditto -	1,600	3½	30	Ditto.
23 „	Pennington - -	Ulverstone -	570	3½	30	Sewerage and sewage disposal.
27 „	Carnforth - -	Lancaster -	700	3½	30	Sewerage.
29 „	East Ardsley - -	Wakefield -	2,665	3½	30	Water supply.
29 „	West Ardsley - -	Ditto -	2,665	3½	30	Ditto.
30 „	Barwick-in-Elmet -	Tadcaster -	500	3½	30	Ditto.
2 Oct.	Newport - - -	Isle of Wight	500	3½	30	Ditto.

Date.	Place.	Union.	Amount.	Rate per Cent.	No. of Years.	Purpose.
1882.			£			
25 Oct.	Embleton - -	Alnwick -	150	3¾	30	Sewerage and sewage disposal.
27 „	Mount Charles and Charlestown.	St. Austell -	200	3¾	30	Water supply.
6 Nov.	Hanwell - - -	Brentford -	4,000	3¾	30	Purchase of land.
6 „	Ditto - - -	Ditto - -	11,000	3¾	30	Sewerage and sewage disposal.
6 „	Arnside - - -	Kendal - -	500	3¾	30	Water supply.
14 „	Craster - - -	Alnwick -	236	3¾	30	Ditto.
14 „	Dunstan - - -	Ditto -	254	3¾	30	Ditto.
15 „	Denbury - - -	Newton Abbot	300	3¾	30	Ditto.
16 „	Church Coppenhall	Nantwich -	700	3¾	30	Ditto.
11 Dec.	Alsager - - -	Congleton -	2,000	3¾	30	Ditto.
20 „	Leighton - - -	Nantwich -	1,380	3¾	30	Ditto.
20 „	Minshull Vernon -	Ditto -	720	3¾	30	Ditto.
20 „	Wolstanwood - -	Ditto -	500	3¾	30	Ditto.
20 „	Warmingham - -	Ditto -	135	3½	20	Ditto.
29 „	Much Hadham -	Bishop Stortford.	374	3¾	30	Sewerage and sewage disposal.
			165,711			

LOAN recommended by the BOARD to be advanced by the PUBLIC WORKS LOAN COMMISSIONERS under the Artizans' and Labourers' Dwellings Act during the Year ended with 31st December 1882.

Date.	Name.	Amount.	Rate per Cent.	Number of Years.	Purpose.
1882.		£			
28 Dec.	Birmingham - - -	100,000	3½	20	Artizans' and Labourers' Dwellings.

LOANS recommended by the BOARD to be advanced by the PUBLIC WORKS LOAN COMMISSIONERS to UNITED and JOINT BOARDS during the Year ended with 31st December 1882.

Date.	Name.	Amount.	Rate per Cent.	Number of Years.	Purpose.
1882.		£			
27 Jan.	Darenth Valley - -	10,000	4¼	50	Sewerage.
10 Mar.	Rochester and Chatham	5,000	3¾	30	Hospital.
16 May	Darenth Valley - -	30,000	3¾	30	Sewerage.
21 Oct.	Bromley and Beckenham	600	4¼	50	Purchase of site for hospital.
1 Dec.	Rochester and Chatham	1,000	3¾	30	Purchase of land and erection of a hospital.
		46,600			

No. 108.

Local Government Districts constituted during the year 1882, in pursuance of Resolutions of Owners and Ratepayers.

(In continuation of Eleventh Report of Local Government Board, page 429.)

Area of District.	County.	Date when formed.
Parish of Biddulph - - - - -	Stafford - -	25 March 1882.
Part of the Parish of Arlecdon - - - -	Cumberland -	1 May 1882.
Township of Rishton - - - - -	Lancaster - -	23 June 1882.
The Town Ward of the Parish of Barking - -	Essex - -	14 October 1882.
Parish of Sutton - - - - - -	Surrey - -	20 Dec. 1882.

No. 109.

Alterations of Areas of Sanitary Districts by Provisional Orders.

I.—Local Government Districts extended.

Local Government District.	Description of parts of the Sanitary District added to the Local Government District.	Title of Confirming Act
Marsden-in-Almondbury.	The Local Government District of Marsden-in-Huddersfield in the West Riding of the County of York.	The Local Government Board's Provisional Orders Confirmation (No. 5) Act, 1882.
South Blyth	The part of the Township of Newsham and South Blyth in the Rural Sanitary District of the Tynemouth Union.	(No. 3) "
Watford	Parts of the Parishes of Watford and Bushey in the Rural Sanitary District of the Watford Union.	(No. 3) "
West Cowes	Part of the Rural Sanitary District of the Isle of Wight Union.	(No. 7) "
Workington	The part of the Township of Workington and the whole of the Parish of Cloffocks, in the Rural Sanitary District of the Cockermouth Union.	The Local Government Board's Provisional Order Confirmation (No. 11) Act, 1882.

II.—Improvement Act District extended.

Improvement Act District.	Description of part of the Sanitary District added to the Improvement Act District.	Title of Confirming Act.
Fleetwood	Part of the Rural Sanitary District of the Fylde Union.	The Local Government Board's Provisional Orders Confirmation (No. 9) Act, 1882.

No. 110.

PROVISIONAL ORDERS.

A.—LOCAL GOVERNMENT AND PUBLIC HEALTH.

I.—Provisional Orders issued under the Public Health Act, 1875, and confirmed during the Year 1882.

(In continuation of Eleventh Annual Report of Local Government Board, p. 432.)

Sanitary District.	Purpose.	Title of Confirming Act.
Ashton-under-Lyne (Urban.)	Partial repeal, alteration, and amendment of Local Acts.	The Local Government Board's Provisional Orders Confirmation (No. 6.) Act, 1882
Bath (Urban.)	Compulsory purchase	(No. 2.) „
Bethesda (Urban.)	Partial repeal, alteration, and amendment of a Local Act, and alteration of a Confirming Act.	(No. 6.) „
Billericay Union (Rural.)	Compulsory purchase	(No. 4.) „
Birmingham (Urban.)	Alteration and amendment of Confirming Acts.	(No. 3.) „
Birmingham (Urban.)	Alteration of the Birmingham Improvement Act, 1851.	(No. 3.) „
Brierley Hill (Urban.)	Compulsory purchase	(No. 2.) „
Bristol (Urban.)	Alteration and amendment of a Confirming Act.	The Local Government Board's Provisional Orders Confirmation Act, 1882.
Bristol (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation (No. 4.) Act, 1882.
Bromley (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation Act, 1882.
Burton-upon-Trent (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation (No. 2.) Act, 1882
Bury (Urban.)	Compulsory purchase	(No. 5.) „
Bury (Urban.)	Partial repeal, alteration, and amendment of Local Acts.	(No. 5.) „
Cardiff (Port of.)	Constitution of a permanent Port Sanitary Authority, and for other purposes.	The Local Government Board's Provisional Orders Confirmation Act, 1882.
Compton Gifford (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation (No. 4.) Act, 1882
Crompton (Urban.)	Compulsory purchase	(No. 7.) „
Ealing (Urban.)	Compulsory purchase	(No. 7.) „
Edmonton (Urban.)	Compulsory purchase	(No. 7.) „
Farnham Union (Rural.)	Compulsory purchase	(No. 4.) „

Sanitary District.	Purpose.	Title of Confirming Act.
Fleetwood (Urban.)	Alteration of a Local Act	The Local Government Board's Provisional Orders Confirmation (No. 9.) Act, 1882
Gainsborough (Urban.)	Alteration of Confirming Acts	(No. 3.) „
Glendale Union (Rural.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation Act, 1882.
Godalming Main Sewerage District: comprising Godalming (Urban.) Guildford Union (Rural, part of.)	Formation of a United District under section 279 of the Public Health Act, 1875.	The Local Government Board's Provisional Orders Confirmation (No. 5.) Act, 1882
Hastings (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation Act, 1882.
Heckmondwike (Urban.)	Partial repeal and amendment of Local Acts.	The Local Government Board's Provisional Orders Confirmation (No. 6.) Act, 1882
Hendon (Urban.)	Compulsory purchase	(No. 4.) „
Keighley Union (Rural.)	Compulsory purchase	(No. 2.) „
Lewes (Urban.)	Adjustment of liabilities under section 304 of the Public Health Act, 1875.	(No. 6.) „
Lytham (Urban.)	Amendment of a Local Act and a Confirming Act.	(No. 6.) „
Madron (Urban.)	Compulsory purchase	(No. 4.) „
Margate (Urban.)	Compulsory purchase	(No. 2.) „
Marsden (Urban.)	Extension of a Local Government district, and for other purposes.	(No. 5.) „
Merthyr Tydfil (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation Act, 1882.
Newbury (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation (No. 2.) Act, 1882.
Newport (Mon.) (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation Act, 1882.
Northwich (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation (No. 5.) Act, 1882
Nottingham (Urban.)	Compulsory purchase	(No. 4.) „
Pemberton (Urban.)	Alteration and amendment of Local Acts.	(No. 6.) „
Plymouth (Port of.)	Constitution of a permanent Port Sanitary Authority, and for other purposes.	(No. 7.) „
Portsmouth (Urban.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation Act, 1882.

Sanitary District.	Purpose.	Title of Confirming Act.
Preston - - (Urban.)	Compulsory purchase - - -	The Local Government Board's Provisional Orders Confirmation (No. 2.) Act, 1882.
Ramsgate - - (Urban.)	Compulsory purchase - -	(No. 2.) ,,
Rhyl - - (Urban.)	Partial repeal and alteration of Local Acts.	(No. 9.) ,,
Rochdale - - (Urban.)	Partial repeal, alteration, and amendment of Local Acts and Confirming Acts.	(No. 6.) ,,
Rusholme - - (Urban.)	Compulsory purchase - - -	(No. 4.) ,,
Ryde - - (Urban.)	Alteration and amendment of a Confirming Act.	(No. 10.) ,,
Saint Helens - - (Urban.)	Compulsory purchase - - -	(No. 2.) ,,
Salford - - (Urban.)	Alteration of Local Acts - - -	(No. 8.) ,,
Sandal Magna - (Urban.)	Compulsory purchase - - -	The Local Government Board's Provisional Orders Confirmation Act, 1882.
Settle Union - - (Rural.)	Compulsory purchase - - -	The Local Government Board's Provisional Orders Confirmation (No. 2.) Act, 1882
Smethwick - - (Urban.)	Alteration of the Smethwick Local Board (Gas) Act, 1876.	(No. 3.) ,,
South Blyth - - (Urban.)	Extension of Local Government district of South Blyth, and for other purposes.	(No. 3.) ,,
Sowerby Bridge - (Urban.)	Partial repeal, alteration, and amendment of the Sowerby Bridge Local Board Act, 1863.	(No. 6.) ,,
Stafford - - (Urban.)	Alteration of the Stafford Corporation Act, 1876.	(No. 3.) ,,
Staines Joint Hospital District: comprising Staines - - (Urban.) Staines Union - (Rural.)	Formation of a United District under section 279 of the Public Health Act, 1875.	(No. 3.) ,,
Surbiton - - (Urban.)	Partial repeal and alteration of the Surbiton Improvement Act, 1855.	(No. 3.) ,,
Torquay - - (Urban.)	Alteration and amendment of a Confirming Act.	(No. 4.) ,,
Tyne, River - - (Port of.)	Constitution of a Permanent Port Sanitary Authority, and for other purposes.	(No. 7. ,,
Uxbridge Joint Hospital District: comprising Uxbridge - - (Urban.) Uxbridge Union - (Rural.)	Formation of a United District under section 279 of the Public Health Act, 1875.	(No. 3.) ,,
Walsall - - - (Urban.)	Partial repeal and alteration of a Local Act.	(No. 4.) ,,

Sanitary District.	Purpose.	Title of Confirming Act.
Ware Union (Rural.)	Compulsory purchase	The Local Government Board's Provisional Orders Confirmation Act, 1882.
Watford (Urban,)	Extension of the Local Government district of Watford.	The Local Government Board's Provisional Orders Confirmation (No. 3.) Act, 1882
West Bromwich (Urban.)	Partial repeal and alteration of Local Acts.	(No. 4.) „
West Cowes (Urban.)	Extension of the Local Government district of West Cowes.	(No. 7.) „
Wigan (Urban.)	Alteration and amendment of Local Acts.	(No. 3.) „
Woodford (Urban.)	Compulsory purchase	(No. 7.) „
Workington (Urban.)	Extension of the Local Government district of Workington, division into wards, and alteration and extension of the provisions of a Local Act.	(No. 11.)
Worthing (Urban.)	Partial repeal and amendment of Local Acts and a Confirming Act.	(No. 4.) „
York (Urban.)	Alteration and amendment of Local Acts.	(No. 9.) „

II.—Provisional Order issued under the Public Health Act, 1875, during the year 1882, but not confirmed.

(*In continuation of Tenth Annual Report of Local Government Board, p.* 501.)

Sanitary District.	Purpose.
Finchley Local Government District	Compulsory purchase.

III.—Provisional Order for confirming an Improvement Scheme under the Artizans and Labourers Dwellings Improvement Act, 1875, issued and confirmed during the year 1882.

(*In continuation of Ninth Annual Report of Local Government Board, p.* 506.)

Sanitary District.	Title of Confirming Act.
Nottingham, Borough of	The Local Government Board's Provisional Order Confirmation (Artizans and Labourers Dwellings) Act, 1882.

IV.—PROVISIONAL ORDER for authorising a Gas Undertaking under the Gas and Water Works Facilities Act, 1870, and the Public Health Act, 1875, issued and confirmed during the Year 1882.

(*In continuation of Eleventh Annual Report of Local Government Board, p.* 435.)

Sanitary District.	Title of Confirming Act.
Upper Sedgley Local Government District.	The Local Government Board's (Gas) Provisional Order Confirmation Act, 1882.

V.—PROVISIONAL ORDER issued under Section 16 of the Highways and Locomotives (Amendment) Act, 1878 (41 & 42 Vict. c. 77.), and confirmed during the year 1882.

(*In continuation of Eleventh Annual Report of Local Government Board, p.* 436.)

County.	Title of Confirming Act.
Kent - - - -	The Local Government Board's Provisional Order Confirmation (Highways) Act, 1882.

B.—POOR LAW.

ORDERS issued under the Divided Parishes and Poor Law Amendment Act, 1876 (39 & 40 Vict. c. 61.), as amended and extended by the Poor Law Act, 1879 (42 & 43 Vict. c. 54.), which, having become provisional, were confirmed during the year 1882.

Parishes, &c.	Purpose.	Title of Confirming Act.
Barmbrough, Burghwallis, Conisbrough, Hickleton, Kirk Bramwith, and Kirk Sandall and Trumfleet Parishes, and Adwick-le-Street, Askern, Barnby-upon-Don or Barnby Dunn, Campsall, Langthwaite-with-Tilts, Mexbrough, Moss, Owton, and Thorpe-in-Balne townships.	Amalgamating isolated and detached parts of parishes or townships with adjoining parishes or townships.	The Local Government Board's Provisional Orders Confirmation (Poor Law) Act, 1882.
Coleshill and Inglesham parishes	Amalgamating isolated and detached part of parish with adjoining parish.	„ „
Dalton and Ecclesfield townships	Amalgamating isolated and detached part of township with adjoining township.	„ „
Forrest Hill, Shotover, and Shotover Hill Place Parishes.	Amalgamating parishes with adjoining parish.	„ „
Helmington Row and Willington townships.	Amalgamating isolated and detached parts of township with adjoining township.	„ „

No. 111.

List of Confirming Acts passed in 1882, and of Provisional Orders thereby confirmed.

(In continuation of Eleventh Annual Report of the Local Government Board, p. 437.)

45 Vict. c. xxvi. -	The Local Government Board's Provisional Order Confirmation (Highways) Act, 1882: An Act to confirm a Provisional Order of the Local Government Board under the Highways and Locomotives (Amendment) Act, 1878, relating to the County of Kent.
45 Vict. c. xxxiii. -	The Local Government Board's Provisional Orders Confirmation Act, 1882: An Act to confirm certain Provisional Orders of the Local Government Board relating to the City and County of Bristol, the Local Government District of Bromley, the Port of Cardiff, the Rural Sanitary District of the Glendale Union, the Borough of Hastings, the Local Government District of Merthyr Tydfil, the Boroughs of Newport (Monmouthshire) and Portsmouth, the Local Government District of Sandal Magna, and the Rural Sanitary District of the Ware Union.
45 Vict. c. xxxiv. -	The Local Government Board's Provisional Orders Confirmation (Poor Law) Act, 1882: An Act to confirm certain Orders of the Local Government Board under the provisions of the Divided Parishes and Poor Law Amendment Act, 1876, as amended and extended by the Poor Law Act, 1879, relating to the Parishes of Barmbrough, Burghwallis, Coleshill, Conisbrough, Forrest Hill, Hickleton, Inglesham, Kirk Bramwith, Kirk Sandall and Trumfleet, Shotover, and Shotover Hill Place, and to the Townships of Adwick-le-Street, Askern, Barnby-upon-Don or Barnby Dunn, Campsall, Dalton, Ecclesfield, Helmington Row, Langthwaite-with-Tilts, Mexbrough, Moss, Owston, Thorpe-in-Balne, and Willington.
45 & 46 Vict. c. lix. -	The Local Government Board's Provisional Order Confirmation (Artizans and Labourers Dwellings) Act, 1882: An Act to confirm a Provisional Order of the Local Government Board under the provisions of the Artizans and Labourers Dwellings Improvement Act, 1875, relating to the Borough of Nottingham.
45 & 46 Vict. c. lx. -	The Local Government Board's Provisional Orders Confirmation (No. 2) Act, 1882: An Act to confirm certain Provisional Orders of the Local Government Board relating to the City and Borough of Bath, the Local Government District of Brierley Hill, the Borough of Burton-upon-Trent, the Rural Sanitary District of the Keighley Union, the Boroughs of Margate, Newbury, and Preston, the Town of Ramsgate, the Borough of Saint Helens, and the Rural Sanitary District of the Settle Union.

LIST of Confirming Acts passed in 1882, and of Provisional Orders thereby confirmed—*continued.*

45 & 46 Vict. c. lxi. -	The Local Government Board's Provisional Orders Confirmation (No. 3) Act, 1882: An Act to confirm certain Provisional Orders of the Local Government Board relating to the Borough of Birmingham (two), the Local Government Districts of Gainsborough, Smethwick, and South Blyth, the Borough of Stafford, the Staines Joint Hospital District, the Improvement Act District of Surbiton, the Uxbridge Joint Hospital District, the Local Government District of Watford, and the Borough of Wigan.
45 & 46 Vict. c. lxii. -	The Local Government Board's Provisional Orders Confirmation (No. 4) Act, 1882: An Act to confirm certain Provisional Orders of the Local Government Board relating to the Rural Sanitary District of the Billericay Union, the City and County of Bristol, the Local Government District of Compton Gifford, the Rural Sanitary District of the Farnham Union, the Local Government Districts of Hendon and Madron, the Borough of Nottingham, the Local Government Districts of Rusholme and Torquay, the Borough of Walsall, the Improvement Act District of West Bromwich, and the Local Government District of Worthing.
45 & 46 Vict. c. lxiii. -	The Local Government Board's Provisional Orders Confirmation (No. 6) Act, 1882: An Act to confirm certain Provisional Orders of the Local Government Board relating to the Borough of Ashton-under-Lyne, the Improvement Act District of Bethesda, the Local Government District of Heckmondwike, the Borough of Lewes, the Improvement Act District of Lytham, the Local Government District of Pemberton, the Borough of Rochdale, and the Local Government District of Sowerby Bridge.
45 & 46 Vict. c. lxiv.	The Local Government Board's Provisional Orders Confirmation (No. 7) Act, 1882: An Act to confirm certain Provisional Orders of the Local Government Board relating to the Local Government Districts of Ealing, Edmonton, and Crompton, the Ports of Newcastle, North Shields, and South Shields, the Port of Plymouth, and the Local Government Districts of West Cowes and Woodford.
45 & 46 Vict. c. lxix.	The Local Government Board's Provisional Order Confirmation (No. 10) Act, 1882: An Act to confirm a Provisional Order of the Local Government Board relating to the Borough of Ryde.
45 & 46 Vict. c. xcvii.	The Local Government Board's Provisional Order Confirmation (No. 8) Act, 1882: An Act to confirm a Provisional Order of the Local Government Board relating to the Borough of Salford.
45 & 46 Vict. c. xcviii.	The Local Government Board's Provisional Order Confirmation (No. 11) Act, 1882: An Act to confirm a Provisional Order of the Local Government Board relating to the Local Government District of Workington.

List of Confirming Acts passed in 1882, and of Provisional Orders thereby confirmed—*continued.*

45 & 46 Vict. c. ciii. -	The Local Government Board's Provisional Orders Confirmation (No. 9) Act, 1882: An Act to confirm certain Provisional Orders of the Local Government Board relating to the Improvement Act Districts of Fleetwood and Rhyl and the City of York.
45 Vict. c. clxix. -	The Local Government Board's (Gas) Provisional Order Confirmation Act, 1882: An Act to confirm a Provisional Order of the Local Government Board under the provisions of the Gas and Water Works Facilities Act, 1870, and the Public Health Act, 1875, relating to the Local Government District of Upper Sedgley.
45 Vict. c. clxx. -	The Local Government Board's Provisional Orders Confirmation (No. 5) Act, 1882: An Act to confirm certain Provisional Orders of the Local Government Board relating to the Borough of Bury (two), the Godalming Main Sewerage District and the Local Government Districts of Marsden and Northwich.

No. 112.

1. Local Acts promoted by Urban Sanitary Authorities during the Session of 1882.

Accrington Corporation Tramways Act, 1882 (45 & 46 Vict. c. cxviii.)
Accrington Improvement Act, 1882 (45 & 46 Vict. c. clxxiii.)
Blackburn Improvement Act, 1882 (45 & 46 Vict. c. ccxliii.)
Bolton Improvement Act, 1882 (45 & 46 Vict. c. ccxliv.)
Carnarvon (Morfa Seiont Common) Act, 1882 (45 & 46 Vict. c. cxii.)
Chadderton Improvement Act, 1882 (45 & 46 Vict c. ccxxiv.)
Derby Corporation Act, 1882 (45 & 46 Vict. c. ccxlv.)
Fulwood and Whittingham Water Act, 1882 (45 & 46 Vict. c. xi.)
Halifax Corporation Act, 1882 (45 & 46 Vict. c. ccxxxiv.)
Huddersfield Corporation Act, 1882 (45 & 46 Vict. c. ccxxxvi.)
Hull Extension and Improvement Act, 1882 (45 & 46 Vict. c. cxv.)
Liverpool Improvement Act, 1882 (45 & 46 Vict. c. lv.)
Macclesfield Corporation Act, 1882 (45 & 46 Vict. c. ccxlix.)
Manchester Corporation Act, 1882 (45 & 46 Vict. c. cciii.)
Maryport Improvement (Harbour) Act, 1882 (45 & 46 Vict. c. clviii.)
Newcastle-upon-Tyne Corporation Loans Act, 1882 (45 & 46 Vict. c. ccxxxv.)
Newcastle-upon-Tyne Improvement Act, 1882 (45 & 46 Vict. c. clxxii.)
Northampton Corporation Act, 1882 (45 & 46 Vict. c. ccxii.)
Nottingham Corporation Act, 1882 (45 & 46 Vict. c. ccxvii.)
Oswaldtwistle Local Board Act, 1882 (45 & 46 Vict. c. cxvii.)
Padiham Local Board Act, 1882 (45 & 46 Vict. c. cix.)
Rotherham Corporation Act, 1882 (45 & 46 Vict. c. ccxxxvii.)
Saint Helen's (Corporation) Water Act, 1882 (45 & 46 Vict. c. cxlix.)
Swansea Corporation Loans Act, 1882 (45 & 46 Vict. c. ccxxxviii.)
Tynemouth Corporation Loans Act, 1882 (45 & 46 Vict. c. ccxxxix.)
West Ham Local Board Extension of Powers Act, 1882 (45 & 46 Vict. c. xxxvii.)
Wolverhampton Corporation Loans Act, 1882 (45 & 46 Vict. c. ccxl.)

2. Local Acts promoted by Gas or Water Companies in England and Wales, other than Metropolitan Companies, during the Session of 1882.

Ascot District Gas Act, 1882 (45 & 46 Vict. c. cli.)
Bristol Waterworks Act, 1882 (45 & 46 Vict. c. clxxv.)
Bromsgrove Gas Act, 1882 (45 & 46 Vict. c. xl.)
Busby Water Act, 1882 (45 & 46 Vict. c. cex.)
Driffield Water Act, 1882 (45 & 46 Vict. c. cl.)
East Warwickshire Waterworks Act, 1882 (45 & 46 Vict. c. ccxxx.)
Exmouth Gas Act, 1882 (45 & 46 Vict. c. xcvi.)
Horncastle Water Act, 1882 (45 & 46 Vict. c. xxiv.)
Liverpool United Gaslight Company's Act, 1882 (45 & 46 Vict. c. xcv.)
Maidstone Waterworks Act, 1882 (45 & 46 Vict. c. vi.)
Newquay and District Water Act, 1882 (45 & 46 Vict. c. cvii.)
Northampton Waterworks Act, 1882 (45 & 46 Vict. c. lxxiv.)
Northwich Gas Act, 1882 (45 & 46 Vict. c. lxxxiii.)
Oxford Gas Act, 1882 (45 & 46 Vict. c. cxxvii.)
Ross District Water Act, 1882 (45 & 46 Vict. c. ccxxxi.)
Rothwell Gas Act, 1882 (45 & 46 Vict. c. cxxii.)
Rugby Gas Act, 1882 (45 & 46 Vict. c. lxxxvi,)
South Essex Waterworks Act, 1882 (45 & 46 Vict. c. xlv.)
Stroud Water Act, 1882 (45 & 46 Vict. c. lxxxi.)
Todmorden Waterworks Act, 1882 (45 & 46 Vict. c clxv.)
Tottenham and Edmonton Gas Act, 1882 (45 & 46 Vict. c. cv.)
Tredegar Water and Gas Act, 1882 (45 & 46 Vict. c. clxxx.)
Westgate and Birchington Gas Act, 1882 (45 & 46 Vict. c. cxix.)

No. 113.

SANITARY DISTRICTS for which BYELAWS have been CONFIRMED during the Year ended on the 31st of December 1882.

Sanitary District.	County.
Aberdare (Local Gov. District.)	Glamorgan.
Abingdon (Rural Sanitary District.)	Berks.
Allerton (Local Gov. District.)	Lancaster.
Alnwick (Rural Sanitary District.)	Northumberland.
Altrincham (Local Gov. District.)	Chester.
Ashborne (Local Gov. District.)	Derby.
Aston, Manor of (Local Gov. District.)	Warwick.
Barnsley (Borough.)	York.
Barton, Eccles, Winton, and Monton. (Local Gov. District.)	Lancaster.
Barton upon Irwell (Rural Sanitary District.)	Lancaster.
Bath (Rural Sanitary District.)	Somerset.
Beccles (Borough.)	Suffolk.
Bethesda (Improvement Act Dist.)	Carnarvon.
Beverley (Borough.)	York.
Bideford (Borough.)	Devon.
Birkenhead (Borough.)	Chester.
Birmingham (Borough.)	Warwick.
Blackburn (Borough.)	Lancaster.
Blackpool (Borough.)	Lancaster.
Bournemouth (Improvement Act Dist.)	Southampton.
Brighton (Borough.)	Sussex.
Bristol (City.)	Bristol.
Buglawton (Local Gov. District.)	Chester.
Canterbury (City.)	Kent.
Chertsey (Rural Sanitary District.)	Surrey.
Chorley (Borough.)	Lancaster.
Christchurch (Rural Sanitary District.)	Southampton.
Claines (Local Gov. District.)	Worcester.
Clevedon (Local Gov. District.)	Somerset.
Compton Gifford (Local Gov. District.)	Devon.
Conway (Borough.)	Carnarvon.
Conway (Rural Sanitary District.)	Carnarvon.
Crewe (Borough.)	Chester.
Crickhowell (Rural Sanitary District.)	Brecknock
Croydon (Rural Sanitary District.)	Surrey.
Derby (Borough.)	Derby.
Dewsbury (Borough.)	York.
Doncaster (Borough.)	York.
Doncaster (Rural Sanitary District.)	York.
Eastbourne (Local Gov. District.)	Sussex.
Easthampstead (Rural Sanitary District.)	Berks.
Egremont (Local Gov. District.)	Cumberland.

Sanitary District.	County.
Fulwood - - - - (Local Gov. District.)	Lancaster.
Gainsborough - - - (Local Gov. District.)	Lincoln.
Glanford Brigg - - - (Rural Sanitary District.)	Lincoln.
Grantham - - - - (Borough.)	Lincoln.
Hastings - - - - (Borough.)	Sussex.
Hayfield - - - - (Rural Sanitary District.)	Derby.
Hertford - - - - (Borough.)	Hertford.
Hertford - - - - (Rural Sanitary District.)	Hertford.
Horncastle - - - - (Rural Sanitary District.)	Lincoln.
Hornsey - - - - (Local Gov. District.)	Middlesex.
Hove - - - - - (Improvement Act Dist.)	Sussex.
Huddersfield - - - (Borough.)	York.
Hunslet - - - - (Rural Sanitary District.)	York.
Jarrow - - - - - (Borough.)	Durham.
Kenilworth - - - - (Local Gov. District.)	Warwick.
Kingston-on-Thames - - (Borough.)	Surrey.
Lancaster - - - - (Borough.)	Lancaster.
Leeds - - - - - (Borough.)	York.
Lewes - - - - - (Borough.)	Sussex.
Lincoln - - - - - (City.)	Lincoln.
Llandudno - - - - (Improvement Act Dist.)	Carnarvon.
Luton - - - - - (Borough.)	Bedford.
Maesteg - - - - (Local Gov. District.)	Glamorgan.
Maidstone - - - - (Borough.)	Kent.
Malvern - - - - (Local Gov. District.)	Worcester.
Martley - - - - (Rural Sanitary District.)	Worcester.
Melksham - - - - (Local Gov. District.)	Wilts.
Middlesbrough - - - (Rural Sanitary District.)	York.
Morpeth - - - - (Local Gov. District.)	Northumberland.
Mossley - - - - (Local Gov. District.)	Lancaster, York, and Chester.
Nantwich - - - - (Rural Sanitary District.)	Chester.
Newhaven - - - - (Local Gov. District.)	Sussex.
Newton Abbot - - - (Rural Sanitary District.)	Devon.
Normanby - - - - (Local Gov. District.)	York.
Oldham - - - - (Borough.)	Lancaster.
Ormesby - - - - (Local Gov. District.)	York.
Orsett - - - - - (Rural Sanitary District.)	Essex.
Osset cum Gawthorpe - (Local Gov. District.)	York.
Paignton - - - - (Local Gov. District.)	Devon.
Petersfield - - - - (Rural Sanitary District.)	Southampton.
Poole - - - - - (Rural Sanitary District.)	Dorset.
Preston - - - - - (Borough.)	Lancaster.
Redcar - - - - - (Local Gov. District.)	York.
Richmond - - - - (Urban Sanitary District.)	Surrey.

Sanitary District.	County.
Rochford - - - - - (Rural Sanitary District.)	Essex.
Romford - - - - - (Local Gov. District.)	Essex.
Romsey - - - - - - (Borough.)	Hants and Wilts.
Ryde - - - - - - (Borough.)	Southampton.
St. Austell - - - - (Rural Sanitary District.)	Cornwall.
St. Thomas the Apostle - (Local Gov. District.)	Devon.
Salford - - - - - (Borough.)	Lancaster.
Saltburn-by-the-Sea - - (Local Gov. District.)	York.
Sandal Magna - - - (Local Gov. District.)	York.
Scarborough - - - (Borough.)	York.
Selby - - - - - - (Rural Sanitary District.)	York.
Sheerness - - - - (Local Gov. District.)	Kent.
Spilsby - - - - - (Rural Sanitary District.)	Lincoln.
Stamford - - - - - (Rural Sanitary District.)	Lincoln.
Stockton - - - - - (Rural Sanitary District.)	Durham.
Surbiton - - - - - (Improvement Act Dist.)	Surrey.
Tadcaster - - - - - (Rural Sanitary District.)	York.
Teignmouth - - - - - (Local Gov. District.)	Devon.
Teignmouth - - - - - (Rural Sanitary District.)	Devon.
Tenbury - - - - - (Rural Sanitary District.)	Worcester.
Tring - - - - - - (Local Gov. District.)	Hertford.
Ulverston - - - - - (Local Gov. District.)	Lancaster.
Waltham Holy Cross - - (Local Gov. District.)	Essex.
Wanstead - - - - - (Local Gov. District.)	Essex.
Warrington - - - - (Borough).	Lancaster and Chester.
Waterloo-with-Seaforth - (Local Gov. District.)	Lancaster.
Wednesbury - - - - (Local Gov. District.)	Stafford.
Wellingborough - - - (Rural Sanitary District.)	Northampton.
West Derby - - - - - (Local Gov. District.)	Lancaster.
West Ham - - - - - (Local Gov. District.)	Essex.
Wirral - - - - - - (Rural Sanitary District.)	Chester.
Worcester - - - - - (Rural Sanitary District.)	Worcester.
Workington - - - - - (Local Gov. District.)	Cumberland.
Wrexham - - - - - (Borough.)	Denbigh.

No. 114.

COUNTIES for which byelaws with respect to waggons, wains, carts and carriages, gates and bicycles have been confirmed under the Highways and Locomotives (Amendment) Act, 1878.

Carnarvon.	Northumberland.
Derby.	Suffolk.
Lancaster.	

COUNTIES for which byelaws with respect to locomotives have been confirmed under the Highways and Locomotives (Amendment) Act, 1878.

Cambridge.	Lancaster.
Carnarvon.	Northumberland.
Chester.	Southampton.
Derby.	Suffolk.
Dorset.	Sussex (Eastern Division).
Durham.	Warwick.

BOROUGH for which byelaws with respect to locomotives have been confirmed under the Highways and Locomotives (Amendment) Act, 1878.

Wolverhampton.

No. 115.

Inquiries by Inspectors in 1882.

Statement of the Special Inquiries held and reported upon by Mr. Arnold Taylor.

Date.	Place.	County.	Act.	Subject.
1882.				
Jan. 19	Farncombe	Surrey	The Public Health Act, 1875.	Dissolution of the district.
	Charterhouse	Ditto	Ditto	Constitution of Special Drainage District.
	Crown Pits	Ditto	Ditto	Ditto.
	Farncombe	Ditto	Ditto	Ditto.
	Godalming, Farncombe, Charterhouse, and Crown Pits.	Ditto	Ditto	Provisional Order.—Formation of United District.
Feb. 8	Malvern	Worcester	Ditto	Objections to sewerage works outside the District.
„ 10	Merthyr Tydfil	Glamorgan	Ditto	Provisional Order.—Compulsory purchase of land for a bridge.
„ 22	South Blyth	Northumberland	Ditto	Provisional Order. — Extension of the district.
„ 24	Lowick	Ditto	Ditto	Provisional Order.—Compulsory purchase of land for water supply.
„ 28	East Grinstead	Sussex	Ditto	Constitution of Local Government District.
Mar. 3	Margate	Kent	Ditto	Provisional Order.—Compulsory purchase of land for a sewage pumping station.
„ 4	Ramsgate	Ditto	Ditto	Provisional Order.—Compulsory purchase of land for street improvements.
„ 7	Burton-upon-Trent	Derby and Stafford.	Ditto	Provisional Order.—Compulsory purchase of land for sewage disposal, street improvements, &c.
„ 8	Fleetwood	Lancaster	Ditto	Provisional Order.—Alteration of Local Act.
„ 9	Arnside	Cumberland	The Public Health Act, 1875, and The Public Health (Water) Act, 1878.	Reasonable cost of water supply.
„ 10	Workington	Ditto	The Public Health Act, 1875.	Provisional Order.—Extension of the district and alteration of Local Acts.
„ 14	East and West Morton	York	Ditto	Provisional Order.—Compulsory purchase of land for sewage disposal.
„ 15	West Hartlepool	Durham	Ditto	Provisional Order.—Alteration of Local Acts.
„ 22	Edmonton	Middlesex	The Public Health Act, 1875, and The Public Health (Interments) Act, 1879.	Provisional Order.—Compulsory purchase of land for burial ground.
„ 24	Brentwood, South Weald and Sheufield.	Essex	The Public Health Act, 1875.	Provisional Order.—Compulsory purchase of land for sewage disposal.
„ 28	Northwich	Chester	Ditto	Ditto.
May 4	Swinton and Pendlebury.	Lancaster	The Public Health Act, 1875, and The Public Health (Interments) Act, 1879.	Cemetery.
June 20	Ingatestone and Fryerning.	Essex	The Public Health Act, 1875.	Order as to special expenses.

STATEMENT of the SPECIAL INQUIRIES held and reported upon by MR. ARNOLD TAYLOR—*cont.*

Date.	Place.	County.	Act.	Subject.
1882.				
July 12	Crewe	Chester	The Public Health Act, 1875, and The Public Health (Water) Act, 1878.	Reasonable cost of water supply.
„ 25 and Oct. 30	Nuneaton and Chilvers Coton.	Warwick	The Public Health Act, 1875.	Sewerage.
Aug. 9	Clifton, Dringhouses, Gate Fulford, Heworth, Holgate, and St. Olave Marygate.	York	Ditto	Urban powers.
Oct. 5	Ramsgate	Kent	The Public Health Act, 1875, and The Local Government Board's Provisional Orders Confirmation (Eastbourne, &c.) Act, 1880.	Division into wards.
Nov. 2	Northwich	Chester	Ditto	Reasonable cost of water supply.
„ 7	Calstock	Cornwall	Ditto	Complaint.—Water supply.
„ 9	Wellington	Somerset	Ditto	Provisional Order.—Compulsory purchase of land for water supply.
„ 17	Ramsgate	Kent	Ditto	Diminution of number of Improvement Commissioners.
Dec. 7	Little Hulton	Lancaster	Ditto	Complaint.—Sewerage.
„ 9	Northwich	Chester	Ditto	Appeal against Private Improvement expenses.
„ 19	Wimbledon	Surrey	Ditto	Provisional Order.—Compulsory purchase of land for sewage disposal.

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES and reported upon by MR. ARNOLD TAYLOR after public inquiry or inspection.

Date.	Place.	County.	Purpose of Loan.	Amount.
1882.				£
Jan. 4	Aberavon	Glamorgan	Gas supply	1,300
„ 5	Tenby	Pembroke	Sewerage	240
„ 17	Tonbridge	Kent	Free library and public offices	2,000
„ 24	Selby	York	Sewerage, water supply, and street improvements.	660
„ 25	Bingley	Ditto	Lighting	350
Feb. 7	Stratford-upon-Avon	Warwick	Land for sewage disposal	4,500
„ 8	Malvern	Worcester	Sewerage	2,000
„ 9	Malvern Link	Ditto	Private street improvements	550
Mar. 1	Hove	Sussex	Land for hospital Land for depôt Groynes	2,070 2,000 1,200
„ 22	Edmonton	Middlesex	Street improvements and burial ground.	72,236
„ 29	Stretford	Lancaster	Sewerage Cemetery	25,000 10,000
May 3	Audenshaw	Ditto	Land for sewage disposal Street improvements	3,500 1,300
„ 9	Littlehampton	Sussex	Sewerage	1,000
„ 12	Herne Bay	Kent	Ditto Fire engine, &c.	1,500 300
„ 31	Bridgnorth	Salop	Gas supply	16,000
June 22	Exeter	Devon	Sewerage, water supply, and street improvements.	7,900
„ 23	Devonport	Ditto	Sewerage	4,000

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES and reported upon by MR. ARNOLD TAYLOR after public inquiry or inspection—*continued.*

Date.	Place.	County.	Purpose of Loan.	Amount.
1882.				£
July 11	Rugby	Warwick	Sewerage, water supply, and street improvements.	5,150
„ 13	Congleton	Chester	Water supply	1,000
			Street improvements	1,500
„ 21	Kidderminster	Worcester	Ditto	20,000
„ 27	Edmonton	Middlesex	Sewerage	600
„ 28	Hove	Sussex	Town hall	5,000
			Cemetery	2,000
Aug. 8	Liversedge	York	Sewerage	12,000
„ 10	South Stockton	Durham and York	Sewerage and public and private street improvements.	15,000
Oct. 3	Croydon	Surrey	Recreation grounds	18,000
			Works at sewage farm	7,450
			Bridges	3,800
Nov. 1	Nantwich	Chester	Improvements	363
„ 10	Taunton	Somerset	Sewerage	200
			Water supply	10,500
„ 16	Margate	Kent	Ditto	3,850
			Street improvements and disinfecting chamber.	1,500
„ 17	Ramsgate	Ditto	Street improvements	4,843
			Gas supply	6,000
			Water supply	4,000
„ 21	Kingston-upon-Hull	York	Ferry boat dock improvement	20,000
			Sewage pumping station	20,000
			Street improvements and market	52,495
			Refuse destructor, &c.	8,000
„ 22 and Dec. 12	Great Driffield	Ditto	Water supply	5,000
Nov. 23	West Hartlepool	Durham	Pleasure grounds	4,000
			Street improvements, disinfecting apparatus, &c.	1,597
Dec. 6	Merthyr Tydfil	Glamorgan	Water supply	10,000
			Payment of mortgage	2,000
„ 19	Wimbledon	Surrey	Private street improvements	4,500
			Cottages at sewage farm	500
			Surface drainage	6,000
„ 21	Southgate	Middlesex	Sewerage, water supply, street improvements, and lamps.	2,717

STATEMENT of the LOANS applied for by RURAL SANITARY AUTHORITIES and reported upon by MR. ARNOLD TAYLOR after public inquiry or inspection.

Date.	Place.	Union.	County.	Purpose of Loan.	Amount.
1882.					£
Jan. 26	Great Ayton	Stokesley	York	Sewerage	700
Feb. 21	Fulwell	Sunderland	Durham	Ditto	350
„ 23	Earsdon	Tynemouth	Northumberland	Water supply	500
„ 28	East Grinstead	East Grinstead	Sussex	Sewerage	1,630
Mar. 30	Worsley	Barton-upon-Irwell.	Lancaster	Private street improvements.	3,700
				Sewerage	3,000
May 30	Marston	Northwich	Chester	Water supply	1,250
	Wincham	Ditto	Ditto	Ditto	1,400
June 20	Ingatestone and Fryerning.	Chelmsford	Essex	Sewerage and water supply.	2,500
July 14	Odd Rode	Congleton	Chester	Water supply	1,000
Dec. 14	Beadlam	Helmsley	York	Ditto	200

STATEMENT of the SPECIAL INQUIRIES held and reported upon by MR. J. T. HARRISON.

Date.	Place.	County.	Act.	Subject.
1882.				
Jan. 17.	Bromley	Kent	The Public Health Act, 1875.	Provisional Order. — Compulsory purchase of land for street improvements.
„ 19	Wormley	Hertford	Ditto	Provisional Order. — Compulsory purchase of land for sewage disposal.
„ „	Stanstead Abbotts.	Ditto	Ditto	Provisional Order. — Compulsory purchase of land for water supply.
„ 25	Bury	Lancaster	Ditto	Provisional Order. — Compulsory purchase of land for street improvements.
Feb. 3	York	York	Ditto	Provisional Order. — Alteration of Local Acts.
„ 21	Frimley	Surrey	Ditto	Provisional Order. — Compulsory purchase of land for sewage disposal.
„ 24	Northfield	Worcester	Ditto	Ditto.
„ 28	Newbury	Berkshire	Ditto	Ditto.
Mar. 2	Ryther with Ozendike.	York	The Public Health (Water) Act, 1878.	Water supply.
„ 3	Sandal Magna	Ditto	The Public Health Act, 1875.	Provisional Order. — Compulsory purchase of land for sewage disposal.
„ 22	Shirley and Freemantle, and South Stoneham.	Southampton	Ditto	Adjustment of accounts.
„ 23	West Cowes	Ditto	Ditto	Provisional Order. — Extension of the district.
„ 30	Barking	Essex	Ditto	Urban powers.
Apr. 27	Caerleon	Monmouth	Ditto	Complaint as to water supply.
May 2 and Oct. 20.	Ashford	Middlesex	Ditto	Sewerage of the West Metropolitan Schools.
May 4	Staines	Ditto	Ditto	Complaint as to sewerage.
July 10	Barking	Essex	Ditto	Constitution of Local Government District.
Aug. 8	West Kent MainSewerage District, and Bromley.	Kent	The West Kent Main Sewerage Acts.	Arbitration.
„ 24	Barwick in Elmet.	York	The Public Health Act, 1875.	Objections to sewerage works outside the district.
Sept. 20	Towyn	Merioneth	The Public Health (Water) Act, 1878.	Investment with the powers of a Rural Authority.
„ 26	Harrow	Middlesex	The Public Health Act, 1875.	Objection to sewerage works outside the district.
„ 29	Evesham and Evesham, R.S.D.	Warwick	Ditto	Provisional Order.—Constitution of United District.
Oct. 10	Smethwick, Aston, &c.	Worcester and Warwick.	Ditto	Arbitration.
Nov. 9	Childer Thornton, Eastham, and Hooton.	Chester	Ditto	Constitution of Special Drainage District.
„ 20	Ripon and Sharow.	York	Ditto	Provisional Order.—Constitution of United District.
„ 29	Cheltenham	Gloucester	Ditto	Provisional Order.—Alteration of a Local Act.
Dec. 21	Lower Thames Valley.	Middlesex and Surrey.	Ditto	Provisional Order.—Alteration of Acts.

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES and reported upon by MR. J. T. HARRISON after public inquiry or inspection.

Date.	Place.	County.	Purpose of Loan.	Amount.
1882.				£
Jan. 26	Astley Bridge	Lancaster	Sewerage and street improvements	1,330
			Cemetery	10,083
Feb. 1	South Shields	Durham	Street improvements	1,090
„ 1	Hebburn	Ditto	Private street improvements	5,001
			Hospital	1,000
„ 2	Blaydon	Ditto	Sewerage	6,000
„ 3	York	York	Baths	3,000
			Public walks	3,614
„ 15	King's Lynn	Norfolk	Sewerage	10,000
„ 16	Colchester	Essex	Ditto	18,000
			Water supply	10,000
„ 23	Walthamstow	Ditto	Private street improvements	1,121
			Sewerage	720
Mar. 8	Hornsey	Middlesex	Private street improvements	14,180
„ 10	Bromley and Beckenham.	Kent	Site for hospital	600
„ 17	Willesden	Middlesex	Private street improvements	3,000
„ 21	Southampton	Southampton	Street improvements	9,073
„ 22	Shirley and Freemantle	Ditto	Ditto	1,000
April 5	Windsor	Berkshire	Sewerage	4,000
„ 13	Birmingham	Warwick	Artizans and Labourers Dwellings Improvement.	100,000
			Improvement of burial ground	1,500
			Street improvements	2,520
			Baths and wash-houses	900
„ 19	Worthing	Sussex	Sewerage and street watering	1,500
„ 26	Penarth	Glamorgan	Swimming bath	3,500
„ 28	Newport	Monmouth	Sewerage	615
May 13	Southend	Essex	Ditto	250
			Private street improvements	3,000
„ 18	Southampton	Southampton	Water supply, street improvements, fire-engine, and cottage at sewage works.	2,219
„ 19	Seaton	Devon	Street improvements	200
„ 24	Pembroke	Pembroke	Water supply	32,000
June 7	Tynemouth	Northumberland	Street improvements	10,350
			Water supply	1,000
„ 8	Jarrow	Durham	Hospital	1,000
			Sewerage and private street improvements.	3,313
			Steam ferry	7,000
„ 9	Sunderland	Ditto	Public and private street improvements.	9,601
			Market	4,500
„ 14	South Hornsey	Middlesex	Private street improvements	6,000
„ 28	Birmingham, Tame, and Rea,	Warwick	Sewerage	19,750

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES and reported upon by MR. J. T. HARRISON after public inquiry or inspection—*continued.*

Date.	Place.	County.	Purpose of Loan.	Amount.
1882.				£
June 29	Hyde	Chester	Private street improvements	10,363
„ 30	Sandal Magna	York	Sewerage, and costs of obtaining a Provisional Order.	6,400
Aug. 5	Whitchurch and Dodington.	Salop	Water supply	1,000
„ 21	Chiswick	Middlesex	Private street improvements	17,000
„ 23	Leyland	Lancaster	Water supply	8,000
„ 25	Sheffield	York	Fire brigade station	8,500
„ 31	Bournemouth	Southampton	Sewerage	1,420
			Private street improvements	1,350
Sept. 6	Eastbourne	Sussex	Street improvements	1,060
			Pleasure grounds	1,000
„ 7	Maidstone	Kent	Hospital	4,000
„ 12	Birmingham	Warwick	Street improvements and refuse disposal.	28,200
„ 13	Hitchin	Hertford	Purchase of market tolls	4,000
„ 15	Tottenham	Middlesex	Sewerage, water supply, and street improvements.	17,500
„ 26	Harrow	Ditto	Sewerage	6,500
„ 29	Evesham	Warwick	Water supply	12,250
Oct. 5	Rochdale	Lancaster	Ditto	60,000
			Cemetery	2,500
„ 6	St. Helen's	Ditto	Street improvements	2,700
„ 25	Lymm	Chester	Sewerage	8,000
„ 31	Epsom	Surrey	Sewerage and water supply	2,500
Nov. 17	Ryton	Durham	Water supply	2,000
„ 18	Hebburn	Ditto	Street improvements and recreation ground.	2,400
„ 21	Malton	York	Street improvements	2,500
„ 29	Cheltenham	Gloucester	Ditto	10,000
„ 30	Stroud	Ditto	Water supply	1,500

STATEMENT of the LOANS applied for by RURAL SANITARY AUTHORITIES and reported upon by MR. J. T. HARRISON, after public inquiry or inspection.

Date.	Place.	Union.	County.	Purpose of Loan.	Amount.
1882.					£
Feb. 21	Frimley	Farnham	Surrey	Sewerage	5,000
Mar. 30	Barking	Romford	Essex	Ditto	8,000
May 16	Stanton St. John	Headington	Oxford	Water supply	500
Aug. 4	Church Gresley	Burton-upon-Trent	Derby	Ditto	1,157
„ 24	Barwick-in-Elmet	Tadcaster	York	Ditto	500
Sept. 21	Alrewas	Lichfield	Stafford	Sewerage	400
Nov. 9	Childer Thornton, Eastham, and Hooton.	Wirral	Chester	Water supply	1,230
	Great Sutton	Ditto	Ditto	Ditto	240
„ 10	Wolverton	Potterspury	Buckingham	Sewerage	2,450

STATEMENT of the SPECIAL INQUIRIES held and reported upon by MAJOR H. TULLOCH.

Date.	Place.	County.	Act.	Subject.
1882. Jan. 4	Warminster	Wiltshire	The Public Health Act, 1875.	Provisional Order.—Compulsory purchase of land for sewage disposal.
„ 10	Newton	Lancaster	Ditto	Urban powers.
„ 18	Smethwick	Stafford	Ditto	Provisional Order.—Alteration of Local Act.
„ 25	Claines	Worcester	The Public Health (Water) Act, 1878. The Public Health Act, 1875.	Investment with the powers of a Rural Sanitary Authority. Adjustment of accounts.
„ 31	Darenth Valley	Kent	Ditto	Conference as to Sewerage Board.
Feb. 14	Aston Netherthorpe	Warwick	Ditto	Pollution of pond.
„ 15	Silsden	York	Ditto	Complaint as to water supply.
„ 17	Abram	Lancaster	Ditto	Provisional Order.—Compulsory purchase of land for water supply.
„ 23	Hunstanton St. Edmunds.	Norfolk	Ditto	Constitution of Local Government District.
„ 24	Crawley and Ifield	Sussex	Ditto	Provisional Order.—Compulsory purchase of land for sewage disposal.
Mar. 1	Newport	Monmouth	Ditto	Provisional Order.—Compulsory purchase of land for improvements.
„ 2	Aberdare	Glamorgan	Ditto	Ditto.
„ 7	Nottingham	Nottingham	Ditto The Artizans' and Labourers' Dwellings Improvement Act, 1875.	Provisional Order.—Compulsory purchase of land for street improvements. Provisional Order.—Confirmation of scheme.
„ 9	Upper Sedgley	Stafford	The Public Health Act, 1875, and The Gas and Waterworks Facilities Acts, 1870 and 1873.	Provisional Order.—Gas supply.
„ 16	St. Helen's	Lancaster	The Public Health Act, 1875.	Provisional Order.—Compulsory purchase of land for street improvements.
„ 17 and May 10.	Hawarden	Flint	Ditto	Water supply.
Mar. 21	Chippenham	Wiltshire	The Public Health Act, 1875, and The Public Health (Water) Act, 1878.	Reasonable cost of water supply, and investment with powers of a Rural Sanitary Authority.

STATEMENT of the SPECIAL INQUIRIES held and reported upon by MAJOR H. TULLOCH—*continued.*

Date.	Place.	County.	Act.	Subject.
1882. Mar. 22	Bristol	Gloucester	The Public Health Act, 1875.	Provisional Order.—Compulsory purchase of land for a bridge.
„ 23	Pontypridd	Glamorgan	Ditto	Division into wards.
April 12 „ 27 and July 12.	Newmarket	Cambridge and Suffolk.	Ditto	Provisional Order.—Extension of the district.
April 14	Holt	Norfolk	Ditto	Water supply.
„ 19	Rishton	Lancaster	Ditto	Constitution of Local Government District.
„ 26	Cambridge	Cambridge	Ditto	Sewerage.
May 9	Connah's Quay	Flint	Ditto	Complaint as to sewerage.
June 2	Longton	Stafford	Ditto	Appeal against private improvement expenses.
Sept. 14	Hawarden	Flint	Ditto	Complaint as to water supply.
„ 22	Bagillt	Ditto	Ditto	Complaint as to sewerage.
Oct. 12	Longridge	Lancaster	Ditto	Constitution of Local Government District.
Dec. 12	Bungay	Suffolk	Ditto	Constitution of Special Drainage District.
„ 19	Haslingden	Lancaster	Ditto	Provisional Order.—Extension of the district.
	Ramsbottom	Ditto	Ditto	Ditto.
	Rawtenstall	Ditto	Ditto	Ditto.
	Cowpe Lenches, Newhallhey, and Hall Carr, Higher Booths, Lower Booths, Newchurch in Rossendale, and Tottington Higher End.	Ditto	Ditto	Constitution of a Local Government District.
	Tottington Higher End and Warth.	Ditto	Ditto	Ditto.
	Musbury	Ditto	Ditto	Ditto.
	Cowpe Lenches, Newhelihey, and Hall Carr, and Newchurch in Rossendale.	Ditto	Ditto	Formation of Separate Highway Parishes.
	Newchurch in Rossendale.	Ditto	Ditto	Urban powers.

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES and reported upon by MAJOR H. TULLOCH after public inquiry or inspection.

Date.	Place.	County.	Purpose of Loan.	Amount.
1882.				£
Jan. 3	Swindon New Town	Wiltshire	Sewerage	5,000
„ 4	Warminster	Ditto	Ditto	5,000
„ 5	Alton	Southampton	Paving	250
„ 11	Southport	Lancaster	Promenade	10,000
„ 12	Newton Heath	Ditto	Street improvements	13,000
			Private street improvements	5,700
„ 19	Bowdon	Chester	Sewerage	1,500
„ 27	Chiswick	Middlesex	Private street improvements	2,700
Feb. 7	Harborne	Stafford	Street improvements	500
„ 16	Padiham and Hapton	Lancaster	Private street improvements	9,530
„ 17	Abram	Ditto	Street improvements	3,500
„ 21	Lowestoft	Suffolk	Sewerage	3,000
„ 28	Bradford	Wiltshire	Purchase of market rights and tolls	250
Mar 8	Long Eaton	Derby	Sewerage	5,000
„ 28	Halifax	York	Inland bonding warehouses	4,500
			Park	6,000
			Street improvements, &c.	11,000
			Slaughter-houses and fire-engine	7,000
„ 29	Barton, Eccles, Winton, and Monton.	Lancaster	Sewerage, street improvements, and baths.	20,474
„ 30	Radcliffe	Ditto	Public and private street improvements	9,800
Apr. 4	Dartford	Kent	Sewerage	5,000
„ 5	Brentford	Middlesex	Ditto	30,000
„ 18	Birkdale	Lancaster	Private street improvements	1,405
„ 20	Great Crosby	Ditto	Street improvements	3,253
„ 25 and May 18.	Beeston	Nottingham	Sewerage	14,000
„ 2	Horsham	Sussex	Sewerage	2,000
			Water supply	1,000
„ 23	Lillington	Warwick	Offices and stables	1,800
„ 25	Burnley	Lancaster	Bridges, river wall, &c.	2,200
June 13	Bristol	Gloucester	Bridge	15,952
„ 16 and July 6.	Twickenham	Middlesex	Sewerage	5,237
„ 7	Horsham	Sussex	Ditto	330
„ 11	Ventnor	Southampton	Sewerage, street improvements, groynes, and mortuary.	1,612
„ 19	Handsworth	Stafford	Street improvements	2,000
Aug. 1	Wallasey	Chester	Gas supply	10,200
„ 2	Abram	Lancaster	Water supply	6,000
„ 3	Winsford	Chester	Street improvements and wharf	700
„ 8	Warminster	Wilts	Sewerage	3,000
„ 9	Mountain Ash	Glamorgan	Sewerage, improvements, slaughter-house, &c.	3,000
„ 10	Ebbw Vale	Monmouth and Brecknock.	New roads	3,000
Sept. 12	Dudley	Worcester	Sewerage	10,000
„ 13	Smethwick	Stafford	Gas supply	50,000
„ 15	Redditch	Worcester and Warwick.	Sewerage, water supply, street improvements, and swimming bath.	9,000
„ 20	Dukinfield	Chester	Sewerage	5,000
			Private street improvements	4,500
Oct. 3	Acton	Middlesex	Street improvements	2,000
„ 5	Harwich	Essex	Sewerage	750
„ 10	Upper Sedgley	Stafford	Gas supply, &c.	8,000
„ 11	West Derby	Lancaster	Street improvements	4,550
„ 13	Birkenhead	Chester	Sewerage	2,700

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES and reported upon by MAJOR H. TULLOCH after public inquiry or inspection—*continued.*

Date.	Place.	County.	Purpose of Loan.	Amount.
1882.				
Oct. 17	Aston Manor	Warwick	Public library and offices	3,050
			Steam roller	400
„ 20	Radcliffe	Lancaster	Private street improvements	4,300
„ 25	Carlton	Nottingham	Sewerage	2,790
„ 26 and Nov. 17.	Wellington	Salop	Water supply	25,000
Oct. 31	Sevenoaks	Kent	Sewerage, offices, and fire-engine house	8,000
Nov. 2	Horsham	Sussex	Paving	500
„ 8	Market Harborough, and Great and Little Bowden.	Leicester and Northampton.	Sewerage	3,000
„ 9	Beeston	Nottingham	Ditto	4,000
„ 15	Balsall Heath	Worcester	Sewerage, offices, &c.	91,569
„ 16	Bala	Merioneth	Water supply	550
„ 22	Folkestone	Kent	Street improvements	2,100
Dec. 28	Shanklin	Southampton	Water supply	300
			Street improvements	695
„ 29	Burgess Hill	Sussex	Sewerage	10,000

STATEMENT of the LOANS applied for by RURAL SANITARY AUTHORITIES and reported upon by MAJOR H. TULLOCH after public inquiry or inspection.

Date.	Place.	Union.	County.	Purpose of Loan.	Amount.
1882.					£
Jan. 20	Stapeley	Nantwich	Chester	Water supply	600
„ 24	Alveley	Brignorth	Salop	Ditto	400
Feb. 8	Barton-under-Needwood.	Burton-upon-Trent.	Stafford	Sewerage	400
Apr. 13	Castle Acre	Freebridge Lynn.	Norfolk	Ditto	600
May 3 and 5.	Hemel Hempstead	Hemel Hempstead.	Hertford	Water supply	900
May 4	Hanwell	Brentford	Middlesex	Sewerage	15,000
„ 11	Llandrillo-yn-Rhos	Conway	Carnarvon and Denbigh.	Subway under railway	1,500
„ 31	Atherstone	Atherstone	Warwick	Water supply	7,000
June 1	Polesworth	Ditto	Ditto	Ditto	3,500
„ 23	Pinner	Hendon	Middlesex	Sewerage	2,000
July 18	Yardley	Solihull	Worcester	Ditto	1,000
Sept. 21	Barnton	Northwich	Chester	Water supply	1,450
	Anderton	Ditto	Ditto	Ditto	450
Oct. 18	Long Lawford	Rugby	Warwick	Sewerage	2,000
„ 19	Newton	Prestwich	Lancaster	Private street improvements	10,000

STATEMENT of the SPECIAL INQUIRIES held and reported upon by MR. S. J. SMITH.

Date.	Place.	County.	Act.	Subject.
1882. Jan. 6 and May 24.	Hinckley	Warwick and Leicester.	The Public Health Act, 1875.	Drainage of workhouse.
Jan. 12, May 18, and June 20.	Hempstead, South Hamlet, Tuffley, and Wotton St. Mary.	Gloucester	Ditto	Constitution of a Special Drainage District.
Jan. 17	Ashover, Bolsover, Brackenfield, Calow, Coal Aston, Dronfield, Eckington, Heath, Holmesfield, Killamarsh, Morton, North Wingfield, Pilsley, Shirland and Higham, Stretton, Sutton-cum-Duckmanton, Temple Normanton, Tupton, Unstone, Wessington, Wingerworth, and Woodthorpe.	Derby	The Public Health Act, 1875, and The Public Health (Water) Act, 1878.	Reasonable cost of water supply.
„ 18	Stafford	Stafford	The Public Health Act, 1875.	Provisional Order. Alteration of Local Act.
„ 21	Portsmouth	Southampton	Ditto	Provisional Order.—Compulsory purchase of land for street improvements.
„ 26	Bath	Somerset	Ditto	Ditto.
Feb 2	Midsomer Norton	Ditto	The Public Health Act, 1875, and The Public Health (Water) Act, 1878.	Reasonable cost of water supply.
„ 22	Ingleton	York	Ditto	Ditto.
„ „	Bentham	Ditto	The Public Health Act, 1875.	Provisional Order.—Compulsory purchase of land for sewage disposal.
„ 25	Finchley	Middlesex	Ditto	Ditto.
„ 28	Hendon	Ditto	Ditto	Ditto.
Mar. 9	Woodford	Essex	Ditto	Ditto.
„ 14	Madron	Cornwall	Ditto	Provisional Order.—Compulsory purchase of land for street improvements.
„ „	Camborne	Ditto	Ditto	Complaint as to sewerage.
„ 15	Compton Gifford	Devon	Ditto	Provisional Order.—Compulsory purchase of land for sewage disposal.
„ 16, and May 16.	Bishopsteignton	Ditto	The Public Health (Water) Act, 1878.	Water supply.
Mar. 16	Chudleigh	Ditto	The Public Health Act, 1875.	Ditto.
„ 17	Budleigh Salterton	Ditto	Ditto	Sewerage.
„ 22	Wolstanton	Stafford	Ditto	Ditto.
April 8	Brading	Southampton	Ditto	Complaint as to sewerage.
„ 11	Ryde	Ditto	Ditto	Provisional Order.—Alteration of Local Acts.
„ 25	Tonge	York	Ditto	Sewage disposal.
„ 26	Low Ireby	Cumberland	Ditto	Provisional Order.—Compulsory purchase of land for water supply.

STATEMENT of the SPECIAL INQUIRIES held and reported upon by MR. S. J. SMITH—*continued*.

Date.	Place.	County.	Act.	Subject.
1882. April 27	Pemberton - - -	Lancaster -	The Public Health Act, 1875.	Provisional Order.—Alteration of Local Acts.
„ „	Over Darwen - -	Ditto -	Ditto - - -	Hospital for infectious diseases.
„ 28	Ramsbottom - -	Ditto -	Ditto - - -	Provisional Order.—Extension of the district.
„ „	Tottington Lower End	Ditto -	Ditto - - -	Constitution of a Local Government District.
May 9	Ightham - - -	Kent - -	Ditto - - -	Complaint as to sewerage.
„ 11 and June 6.	Silvertown - - -	Essex - -	Ditto - - -	Ditto.
May 17, Sept. 15, & Oct. 10.	Plympton - - -	Devon - -	Ditto - - -	Constitution of Local Government District.
June 28	Amlwch - - -	Anglesey -	Ditto - - -	Constitution of Special Drainage District.
Aug. 10	Earls Colne, Colne Engaine, and White Colne.	Essex - -	Ditto - - -	Ditto.
„ 30	Dalston - - -	Cumberland -	Ditto - - -	Ditto.
„ „	Wetheral - - -	Ditto -	Ditto - - -	Ditto.
„ 31	Cleator Moor and Cleator.	Ditto -	Ditto - - -	Adjustment of accounts.
Sept. 1	Over Darwen - -	Lancaster -	Ditto - - -	Public baths.
„ 12	Paul - - - -	Cornwall -	Ditto - - -	Urban powers.
„ „	Penzance - - -	Ditto -	Ditto - - -	Sea defences.
„ 13	Mevagissey - - -	Ditto -	Ditto - - -	Water supply.
„ „	St. Blazey - - -	Ditto -	Ditto - - -	Ditto.
Sept. 15 and Oct. 10.	Compton Gifford -	Devon - -	Ditto - - -	Sewage disposal.
Sept. 27 and Oct. 25.	Seaford - - -	Sussex - -	Ditto - - -	Constitution of Local Government District.
Oct. 11	Totnes - - -	Devon - -	Ditto - - -	Sewage disposal.
„ 13	Thornbury - - -	Gloucester -	Ditto - - -	Drainage of workhouse.
„ 27	Chesham - - -	Buckingham -	Ditto - - -	Constitution of Local Government District.
Nov. 17	Edmonton - - -	Middlesex -	Ditto - - -	Water supply of workhouse.
„ 18 and Nov. 25.	Broadstairs and St. Peters.	Kent - -	Ditto - - -	Steps to sands.
„ 23	Aldershot - - -	Southampton	Ditto - - -	Sewerage.
„ 29	Wantage - - -	Berkshire -	Ditto - - -	Sewage outfall site.
Dec. 8	Newquay - - -	Cornwall -	Ditto - - -	Objections to sewerage works outside the district.

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES, and reported upon by MR. S. J. SMITH, after public inquiry or inspection.

Date.	Place.	County.	Purpose of Loan.	Amount.
1882.				£
Jan. 4	Halstead	Essex	Offices	1,050
„ 10	Abergavenny	Monmouth	Street improvements	2,017
„ 11	Ross	Hereford	Water supply	7,000
„ 24	Ilfracombe	Devon	Street improvements	4,000
„ 25	Tiverton	Ditto	Ditto	500
Feb. 1	Weston-super-Mare	Somerset	Pleasure grounds	25,000
„ 14	Derby	Derby	Sewerage	981
			Street improvements	1,670
„ 16 and Mar. 21.	Winsford	Chester	Sewerage	1,500
			Water supply	400
Feb. 23	Over Darwen	Lancaster	Hospital	3,000
„ 25 and Apr. 4.	Finchley	Middlesex	Street improvements	8,000
Mar. 8 and Mar. 23.	Saltley	Warwick	Sewerage	4,500
„ 9	Woodford	Essex	Private street improvements	500
„ 15	Compton Gifford	Devon	Offices	1,000
„ 18	Exmouth	Ditto	Sewerage	4,500
Apr. 5 and May 2.	Broadstairs and St. Peters.	Kent	Sewerage	10,000
			Street improvements, hydrants, fire engine, and stoneyard.	2,500
			Restoration of highway	500
			Offices	1,000
Apr. 17	St. Mary, Rotherhithe	Surrey	Baths and washhouses	2,500
May 23	Glossop	Derby	Water supply	5,000
„ 24 and June 9 & „ 17.	Hinckley	Leicester and Warwick.	Sewerage	4,000
May 26	Enfield	Middlesex	Street improvements	550
			Sewerage	1,700
June 27	Bangor	Carnarvon	Ditto	1,500
„ 30	Ynyscynhaiarn	Ditto	Gas supply	2,000
July 3	Barmouth	Merioneth	Sewerage and water supply	700
„ 5	Mold	Flint	Market hall	3,000
„ 8	Walton-le-Dale	Lancaster	Water supply	2,000
„ 10	Kendal	Westmoreland	Baths and washhouses	4,500
„ 12	Ulverston	Lancaster	Sewerage	1,800
„ 17	Cleator Moor, Egremont, & Whitehaven (R.S.A.)	Cumberland	Hospital	3,500
„ 22	Portsmouth	Southampton	Street improvements	7,400
„ 25	Worksop	Nottingham	Sewerage	2,500
„ 26	Wombwell	York	Ditto	5,661
Aug. 8	Chelmsford	Essex	Ditto	4,000
„ 9	Newmarket	Cambridge and Suffolk.	Ditto	400
„ 24	Lymington	Southampton	Water supply	8,620
„ 29	Idle	York	Ditto	2,740
„ 31	Cleator Moor	Cumberland	Street improvements	2,000
Sept. 14	Plymouth	Devon	Ditto	19,134
„ 16 and Oct. 12.	Paignton	Ditto	Footpaths	2,000
Sept. 25	Hendon	Middlesex	Private street improvements	2,500
„ 26	Brighton	Sussex	Recreation ground	55,000
			Street improvements	3,000

STATEMENT of LOANS applied for by URBAN SANITARY AUTHORITIES, and reported upon by MR. S. J. SMITH, after public inquiry or inspection—*continued*.

Date.	District.	County.	Purpose of Loan.	Amount.
1882.				£
Oct. 17	Abergavenny	Monmouth	Sewerage	4,200
„ 19	Bath	Somerset	Street improvements	8,000
„ 31	Enfield	Middlesex	Water supply	6,000
Nov. 1	Ilkeston	Derby	Gas supply	4,500
„ 2	Fenton	Stafford	Sewerage	20,000
„ 14	Stoke-upon-Trent	Ditto	Sewerage, street improvements, and baths.	24,680
„ 29	Dawlish	Devon	Water supply	2,000
„ 30 and Dec. 9.	Teignmouth	Ditto	Sewerage Water supply Retaining wall	2,150 250 250
„ 5	Camborne	Cornwall	Street improvements	1,100
„ 6	Penzance	Ditto	Water supply, street improvements, and groynes.	1,758
„ 7	Bodmin	Ditto	Street improvements	2,500
„ 8	Newquay	Ditto	Sewerage	1,500
„ 18	Tottenham	Middlesex	Sewerage and street improvements	20,450

STATEMENT of the LOANS applied for by RURAL SANITARY AUTHORITIES, and reported upon by MR. S. J. SMITH, after public inquiry or inspection.

Date.	Place.	Union.	County.	Purpose of Loan.	Amount.
1882.					£
Jan. 19	Wolstanton	Wolstanton and Burslem.	Stafford	Sewerage	1,100
„ „	Chesterton	Ditto	Ditto	Ditto	1,500
„ 31	Mevagissey	St. Austell	Cornwall	Water supply	1,150
Feb. 15	Meole Brace	Atcham	Salop	Ditto	1,300
„ 21	Settle and Giggleswick.	Settle	York	Ditto	3,000
Mar. 15	Ashburton	Newton Abbot	Devon	Sewerage	100
„ 22	Silverdale	Wolstanton and Burslem.	Stafford	Ditto	1,500
June 27	Bangor	Bangor and Beaumaris.	Carnarvon	Ditto	250
„ 28	Amlwch	Anglesey	Anglesey	Sewerage and water supply.	1,500
July 7	Frodsham	Runcorn	Chester	Sewerage	598
„ 18	Sandwith	Whitehaven	Cumberland	Ditto	150
Aug. 22	Wem	Wem	Salop	Water supply	4,000
„ 30	Dalston	Carlisle	Cumberland	Sewerage	160
„ „	Wetheral	Ditto	Ditto	Ditto	750
Sept. 16	Denbury	Newton Abbot	Devon	Water supply	300
Oct. 18	Westbury-on-Trym	Barton Regis	Gloucester	Sewerage	3,000
„ 24	Much Hadham	Bishop Stortford	Hertford	Ditto	400

STATEMENT of the SPECIAL INQUIRIES held and reported upon by CAPTAIN R. C. T. HILDYARD.

Date.	Place.	County.	Act.	Subject.
1882.				
Feb. 1	Foots Cray	Kent	The Public Health Act, 1875.	Urban powers.
„ 7	Rusholme	Lancaster	Ditto	Provisional Order.—Compulsory purchase of land for sewage disposal.
			Ditto	Objections to sewage works outside the district.
			The Rivers Pollution Prevention Act, 1876.	Order under section 3.
„ 8	Preston	Ditto	The Public Health Act, 1875.	Provisional Order.—Compulsory purchase of land for street improvements.
„ 9	Wigan	Ditto	Ditto	Provisional Order.—Alteration of Local Acts.
„ 14	Cleckheaton	York	Ditto	Provisional Order.—Compulsory purchase of land for sewage disposal.
„ 15	Elland	Ditto	Ditto	Division into wards and increase in number of members of Board.
Mar. 2	Bexley	Kent	Ditto	Complaint as to sewerage.
„ 7	Crompton	Lancaster	Ditto	Provisional Order.—Compulsory purchase of land for sewage disposal.
„ 14	Dorchester	Dorset	Ditto	Ditto.
„ 23	Brierley Hill	Stafford	Ditto	Provisional Order.—Compulsory purchase of land for street improvements.
„ 28 and April 1	Sutton	Surrey	Ditto	Complaint as to sewerage.
„ 4	Halliwell, Heaton, and Bolton No. 1.	Lancaster	Ditto	Urban powers.
„ 12	Matlock Bath and Scarthin Nick.	Derby	Ditto	Provisional Order.—Compulsory purchase of land for pleasure grounds, &c.
„ 18	Pateley Bridge	York	The Public Health Act, 1875, and The Public Health (Water) Act, 1878.	Reasonable cost of water supply.
„ 25	East and West Ardsley	Ditto	The Public Health Act, 1875.	Supply of water by the Soothill Upper Local Board.
May 2	Ealing	Middlesex	Ditto	Provisional Order.—Compulsory purchase of land for hospital.
„ 4 and May 31	Trefonnen	Radnor	Ditto	Constitution of Special Drainage District.
	Llandrindod	Ditto	Ditto	Constitution of Local Government District.
„ 18	Wimborne Minster	Dorset	Ditto	Alteration of Special Drainage District.
„ 19	St. Mary Extra	Southampton	Ditto	Constitution of Special Drainage District.
„ 24 and May 25	Thorner	York	Ditto	Special expenses. Complaint as to sewerage.
June 13	Tarporley	Chester	Ditto	Provisional Order.—Diminution of the district.
July 25	Bolehall and Glascote	Warwick	Ditto	Constitution of Local Government District.
Oct. 11	Derby	Derby	Ditto	Appeal against private improvement expenses.
Nov. 1	Wanstead and Woodford.	Essex	Ditto	Provisional Order.—Alteration of the districts.
„ 10	Southowram	Lancaster	Ditto	Appeal against private improvement expenses.
„ 21	Tockholes	Ditto	Ditto	Complaint as to sewerage.
Dec. 5	Whitby	York	The Public Works Loans Act, 1882.	Loan to the Whitby Port and Harbour Trustees.
„ 8	Rochester	Kent	The Public Health Act, 1875.	Apportionment of expenses of Port Sanitary Authority.

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES and reported upon by CAPTAIN R. C. T. HILDYARD after public inquiry or inspection.

Date.	Place.	County.	Purpose of Loan.	Amount.
1882.				£
Jan. 4	Beckenham	Kent	Offices, stables and depôt	6,000
„ 18	Rochester and Chatham.	Ditto	Purchase of land and erection of hospital.	5,000
„ 20	Newtown and Llanllwchaiarn.	Montgomery	Cemetery	2,000
„ 24	Littleborough	Lancaster	Sewerage	10,000
„ 25	Morley	York	Street improvements	16,500
Feb. 22	Baildon	Ditto	Sewerage, water supply, street improvements, and offices.	2,764
„ 23	Burley	Ditto	Water supply	1,400
„ 24	North Bierley	Ditto	Cemetery	1,300
„ 28	Waltham Holy Cross	Essex	Sewerage	5,000
Mar. 7	Crompton	Lancaster	Public and private street improvements and offices.	6,000
„ 8	Turton	Ditto	Sewerage Street improvements	2,000 1,000
„ 22	Whitwood	York	Sewerage Water supply	2,946 4,054
„ 24	Walsall	Stafford	Sewerage Stone yard and depôt	50,000 1,820
April 13	Ashborne	Derby	Market	3,000
„ 26	Coventry	Warwick	Purchase of site for hospital	1,150
May 9	Hastings	Sussex	Lodges in pleasure grounds	1,700
„ 16	Wells	Somerset	Sewerage Hospital	5,000 500
„ 23	Skelmanthorpe	York	Water supply	5,000
June 14	Newton Heath	Lancaster	Private street improvements Public street improvements	800 700
July 18	Derby	Derby	Public street improvements Depôt	3,325 1,500
Aug. 1	Prestwich	Lancaster	Street improvements Private street improvements	600 1,800
„ 2	Shrewsbury	Salop	Street improvements	10,000
„ 10	Wimbledon	Surrey	Private street improvements	3,200
„ 15	Blackrod	Lancaster	Street improvements	7,653
„ 22	Wallasey	Chester	Private street improvements	8,660
„ 23	Bootle-cum-Linacre	Lancaster	Sewerage, street improvements, and survey of borough.	10,428
Sept. 5	Burnley	Ditto	Slaughter-houses	1,000
„ 6	Newton Heath	Ditto	Private street improvements	2,300
„ 13	Walton-on-the-Hill	Ditto	Street improvements	17,568
„ 14	Wednesbury	Stafford	Ditto	2,000
„ 19	Horncastle	Lincoln	Sewerage, street improvements, and hydrants.	700
„ 21	Wisbech	Ditto	Hospital	750

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES and reported upon by CAPTAIN R. C. T. HILDYARD after public inquiry or inspection—*continued.*

Date.	Place.	County.	Purpose of Loan.	Amount.
1882. Sept. 26	Jarrow	Durham	Sewerage Private street improvements	484 ,444
„ 29	Shipley	York	Street improvements, offices, recreation ground, &c.	10,000
Oct. 6	Hastings	Sussex	Sea defences	3,000
„ 10	Salford	Lancaster	Improvements	150,000
Nov. 9	Waterloo-with-Seaforth	Ditto	Street improvements	1,100
„ 11	Morley	York	Water supply Sewerage	2,000 1,600
„ 22	Blackrock	Lancaster	Offices Cemetery	400 2,275
„ 23	Tunstall	Stafford	Offices and market	12,000
Dec. 5	Whitby	York	Sewerage	9,500
„ 15	New Mills	Derby and Chester	Bridge	4,000
„ 28	Hastings	Sussex	Groynes	1,200

STATEMENT of the LOANS applied for by RURAL SANITARY AUTHORITIES and reported upon by CAPTAIN R. C. T. HILDYARD after public inquiry or inspection.

Date.	Place.	Union.	County.	Purpose of Loan.	Amount.
1882. Jan. 17	Llansaintffraid-Glyn-Dyfrdwg and Corwen.	Corwen	Merioneth	Water supply	£ 600
„ 19	St. Martin	Oswestry	Salop	Ditto	1,100
„ 27	Caythorpe	Newark	Lincoln	Ditto	600
Feb. 1	Foots Cray	Bromley	Kent	Gas lamps	210
Mar. 1	Beddington, Merton, Merton Rush, Mitcham, Morden, and Wallington.	Croydon	Surrey	Sewerage	14,000
„ 21	Sharow	Ripon	York	Ditto	1,200
April 25	East and West Ardsley	Wakefield	Ditto	Water supply	5,500
May 4 and „ 31	Trefonnen	Rhayader	Radnor	Sewerage Water supply	2,000 2,000
„ 5	Amington and Stonydelph, Bolehall and Gascote, Fazeley, Tamworth Castle, Wigginton, and Wilnecote.	Tamworth	Warwick and Stafford.	Ditto	2,751
June 2	Maescar	Brecknock	Brecknock	Ditto	600
„ 19	Tansley	Bakewell	Derby	Ditto	700
„ 20	Melbourne	Shardlow	Ditto	Sewerage	2,700
Sept. 12	Carnforth	Lancaster	Lancaster	Ditto	700
Oct. 13	Rayleigh	Rochford	Essex	Cemetery	500
Dec. 13	Broxbourne	Ware	Hertford	Sewerage	1,000

STATEMENT of the SPECIAL INQUIRIES held and reported upon by MR. T. CODRINGTON.

Date.	Place.	County.	Act.	Subject.
1882. Aug. 3, 4, & 5.	Devonshire		The Highways and Locomotives (Amendment) Act, 1878.	Byelaws for locomotives.
„ 23	Sheffield	York	Ditto	Ditto.
Sept. 13	Wolverhampton	Stafford	Ditto	Ditto.
„ 18	Usk	Monmouth	The Public Health Act, 1875.	Complaint as to sewerage.
Oct. 7	Gargrave	York	The Public Health Act, 1875, and The Public Health (Water) Act, 1878.	Reasonable cost of water supply.
Nov. 7	Norwich	Norfolk	The Public Health Act, 1875.	Complaint as to sewerage and state of roads at Catton.
Dec. 6	Newcastle Higher and Ynisawdre.	Glamorgan	Ditto	Constitution of a Local Government District.

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES and reported upon by MR. T. CODRINGTON after public inquiry or inspection.

Date.	Place.	County.	Purpose of Loan.	Amount.
1882.				£
May 31	Haydock	Lancaster	Water supply	4,500
June 6	Bromsgrove (Town)	Worcester	Sewerage	1,880
„ 27	Lampeter	Cardigan	Water supply	1,500
July 18	Hereford	Hereford	Purchase of land	2,750
„ 21	Acton	Middlesex	Private street improvements	5,200
Aug. 1	Ealing	Ditto	Sewerage Street improvements Fire-engine	5,000 1,600 700
Oct. 6	Loughborough	Leicester	Street improvements	650
Nov. 7	Norwich	Norfolk	Ditto	2,400
„ 8	Bury St. Edmunds	Suffolk	Ditto	800
Dec. 7	Maesteg	Glamorgan	Payment of Debt on market and town hall.	1,100
„ 13	Great Yarmouth	Norfolk	Sewerage, street improvements, and erection of sheds.	1,947

STATEMENT of the LOANS applied for by RURAL SANITARY AUTHORITIES and reported upon by MR. T. CODRINGTON after public inquiry or inspection.

Date.	Place.	Union.	County.	Purpose of Loan.	Amount.
1882.					£
July 7	Hoylake	Wirrall	Chester	Private street improvements.	1,500
„ 8	West Kirby	Ditto	Ditto	Ditto	5,500
	Hoylake and West Kirby.	Ditto	Ditto	Sewerage	155
Sept. 27	Arnside	Kendal	Westmorland	Water supply	500
Oct. 5	Towcester	Towcester	Northampton	Ditto	2,500
„ -	Bettws and Llandilofawr	Llandilofawr	Carmarthen	Ditto	1,000
„ -	Tolleshunt D'Arcy	Maldon	Essex	Sewerage	300
Nov. 16	Llanfihangel Llantarnam	Newport	Monmouth	Ditto	3,600

STATEMENT of the SPECIAL INQUIRIES held and reported upon by MR. S. H. TERRY.

Date.	Place.	County.	Act.	Subject.
1882. Jan. 10	Uckfield	Sussex	The Public Health Act, 1875, and The Public Health (Interments) Act, 1879.	Application of funded property to purchase of land for cemetery.
„ 26	Newborough	Anglesea	Ditto	Ditto.
Mar. 31	Swavesey	Cambridge	The Public Health Act, 1875, and The Public Health (Water) Act, 1878.	Water supply.
Apr. 24	Holbeach	Lincoln	The Public Health Act, 1875.	Complaint as to sanitary condition.
June 2 and 3.	Wrekin	Salop	The Public Health Act, 1875, and The Highways and Locomotives (Amendment) Act, 1878.	Disallowance of auditor with respect to culverts.
	Condover	Ditto	Ditto	Ditto.
	Wellington	Ditto	Ditto	Ditto.
Sept. 19	Chorlton, Leighton, Minshull Vernon, Shavington-cum-Gresty, Stapeley, and Woolstanwood.	Chester	The Public Health Act, 1875, and The Public Health (Water) Act, 1878.	Reasonable cost of water supply.
„ 20	All Stretton	Salop	The Public Health Act, 1875, and The Highways and Locomotives (Amendment) Act, 1878.	Disallowance of auditor with respect to culverts.
Nov. 16	Upper Penn	Stafford	The Public Health Act, 1875.	Constitution of Special Drainage District.
„ 20	Wolverhampton	Ditto	Ditto	Size of wards in workhouse.

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES, and reported upon by MR. S. H. TERRY, after public inquiry or inspection.

Date.	Place.	County.	Purpose of Loan.	Amount.
				£
1882. Feb. 2	St. Helen's	Southampton	Sewerage and water supply	1,250
			Street improvements	850
„ 9	Sandbach	Chester	Paving	500
„ 14	Maidstone	Kent	Site for hospital	900
„ 27	Bournemouth	Southampton	Street improvements	1,900
			Fire-engine, &c.	300
Mar. 10	Dover	Kent	Sewerage	800
			Street improvements	650
			Steam-roller	400
„ 24	Worcester	Worcester	Water supply and street improvements.	700
Apr. 27	Hyde	Chester	Street improvements	5,500
May 26	Aldershot	Southampton	Purchase of land and erection of offices, &c.	2,000

STATEMENT of the LOANS applied for by URBAN SANITARY AUTHORITIES, and reported upon by MR. S. H. TERRY, after public inquiry or inspection—*continued*.

Date.	Place.	County.	Purpose of Loan.	Amount.
				£
June 1	Broseley	Salop	Cemetery	1,400
„ 6	Dover	Kent	Street improvements	200
			Sea defences	350
„ 7	Eastbourne	Sussex	Sewerage	700
			Stables	500
July 3	Ryton	Durham	Cemetery	3,500
„ 19	St. Ives	Cornwall	Water supply	320
„ 21	St. Thomas the Apostle	Devon	Ditto	600
Sept. 22	Charlton Kings	Gloucester	Sewerage	650
Oct. 10	St. Helen's	Southampton	Offices	600
„ 13	Erith	Kent	Purchase of land and erection of disinfecting chamber.	590
„ 17	Hyde	Chester	Site for hospital	550
Nov. 9	Hornsey	Middlesex	Steam-roller	400
„ 10	Beckenham	Kent	Sewerage	1,050
„ 30	Northampton	Northampton	New road	5,000
Dec. 14	Harrogate	York	Sewerage	350
„ 15	Berwick-upon-Tweed	Berwick-upon-Tweed	Street improvements	800

STATEMENT of the LOANS applied for by RURAL SANITARY AUTHORITIES, and reported upon by MR. S. H. TERRY, after public inquiry or inspection.

Date.	Place.	Union.	County.	Purpose of Loan.	Amount.
1882.					£
Jan. 24	Woolstanwood	Nantwich	Chester	Water supply	300
Mar. 2	Upper Penn	Seisdon	Stafford	Sewerage	300
„ 23	Chorlton	Nantwich	Chester	Water supply	150
Apr. 4	Badby	Daventry	Northampton	Cemetery	200
„ 19	East Horndon	Billericay	Essex	Water supply	200
„ 26	Collyweston	Stamford	Northampton	Cemetery	220
„ 28	Hasland	Chesterfield	Derby	Ditto	1,000
July 18	Mylor	Falmouth	Cornwall	Water supply	120
Sept. 12	Norham	Berwick-upon-Tweed	Northumberland	Sewerage	1,000
„ 19	Leighton	Nantwich	Chester	Water supply	1,380
	Minshull Vernon	Ditto	Ditto	Ditto	720
	Woolstanwood	Ditto	Ditto	Ditto	500
	Warmingham	Ditto	Ditto	Ditto	135
„ 26	Brampton	Huntingdon	Huntingdon	Cemetery	700
„ 28 and Nov. 16.	Upper Penn	Seisdon	Stafford	Sewerage	13,000
„ 18	Chrishall	Saffron Walden	Essex	Water supply	200

STATEMENT of SPECIAL INQUIRIES held and reported upon by MR. C. N. DALTON.

Date.	District.	Act.	Nature of Business.
1882. February 10	Newington	Public Works Loans Act, 1875.	Application of loan.
March 10	Rhyl	Public Health Act, 1875	Provisional Order.—Amendment of Local Acts.
„ 17	Bury	Ditto	Ditto.
„ 18	Rochdale	Ditto	Ditto.
„ 24	Lytham	Ditto	Ditto.
„ 25	Sowerby Bridge	Ditto	Ditto.
„ 29	Salford	Ditto	Ditto.
„ 31	Birmingham	Ditto	Provisional Order.—Amendment of Confirming Act.
	Ditto	Ditto	Provisional Order.—Amendment of Local Act.
April 1	Worthing	Ditto	Ditto.
„ 3	Lewes	Ditto	Adjustment of liabilities.
„ 13	Ashton-under-Lyne	Ditto	Provisional Order.—Amendment of Local Acts.
„ 17	Kington	Ditto	Ditto.
„ 18	Heckmondwike	Ditto	Ditto.
„ 21	Batley	Ditto	Ditto.
June 13	Hemel Hempstead	Public Works Loans Act, 1875.	Application of loan.
„ 24	Longeaton	Ditto	Ditto.
„ 27	Maldon	Public Health Act, 1875	Provisional Order.—Alteration of incidence of rating.
July 22	Westbury-upon-Severn	Ditto	Reborrowing.
August 11	Withington	Local Turnpike Act	Award.
„ 12, 23, and 24.	Heywood	Public Health Act, 1875	Compensation to officers of late Local Board.
August 29	Stockport	Ditto	Adjustment of accounts.
October 14	Aberystwith	Public Works Loans Act, 1875.	Application of loan.
„ 23, 25, and 26.	Edmonton and Southgate	Edmonton Local Board (Division of District) Act, 1881.	Apportionment of property and liabilities.
November 7	Stockton	Public Health Act, 1875	Provisional Order.—Amendment of Local Act.
„ 24	Doncaster	Ditto	Ditto.
December 9	Wallasey	Ditto	Ditto.
16	Normanton	Public Works Loans Act, 1875.	Application of loan.

No. 116.

LIST of PORT SANITARY AUTHORITIES as existing on the 31st of December 1882.

Port.	Extent of Jurisdiction.	Authority.	Date to which the powers of the Authority extend.
Boston - - *	So much of the port as lies within an imaginary straight line drawn from Western Point to a point on the opposite shore near Claypole House, with a certain creek or arm of the sea termed "Boston Deeps." [Together with the waters of the port within such limits, and the place for the time being appointed as the Customs boarding station for such part of the port, and every other place for the time being appointed for the mooring or anchoring of ships for such part of the port, under any regulations for the prevention of the spread of diseases issued under the authority of the statutes in that behalf. Also the watersides of the districts of the Riparian authorities named in the order, with the docks, basins, &c., belonging to the part of the port above specified.]	Boston Town Council	March 25th, 1883.
Bridgwater -	So much of the port as lies to the southward of or within an imaginary straight line drawn from the most northerly point of Stert Point to the Lower Lighthouse in the parish of Burnham.	Bridgwater Town Council.	Ditto.
Bristol - -	So much of the port as lies between the eastern boundary of the Customs port at Aust, in the county of Gloucester, and the boundary between the parishes of Walton-in-Gordano and Clevedon in the county of Somerset.	Bristol Town Council	Ditto.
Cardiff - -	So much of the port as lies between the River Rumney and Lavernock Point.	Cardiff Town Council	†
Cardigan -	So much of the port as lies within an imaginary line drawn from Pencemmaes to the nearest point of Cardigan Island, and thence taking the whole of the outer or northern sides of the said island to the nearest point of the parish of Verwick.	Cardigan Town Council.	Ditto.
Carnarvon -	So much of the port as lies within an imaginary straight line drawn from Aberafon Clynnog to the mouth of the Malltreath River.	Carnarvon Town Council.	Ditto.
Chester - -	So much of the port as lies above an imaginary straight line drawn across the River Dee at the Queen's Ferry; together with the waters of the port and river above such imaginary line.	Chester Town Council	Ditto.
Colchester -	So much of the port as lies within an imaginary straight line drawn across the River Colne from Saint Osyth Point on the east bank to Fresh Marsh on the west.	Colchester Town Council.	Ditto.

* Clauses to the same effect as those within brackets, but modified where necessary to meet the circumstances of the case, are contained in the orders issued to the other Ports named on this page.

† Constituted permanently by Provisional Order.

Port.	Extent of Jurisdiction.	Authority.	Date to which the powers of the Authority extend.
Cowes - - *	All that part of the port comprised within a line commencing at the westernmost point of Gurnet Bay at high-water mark, and running eastwards along high-water mark past a place called "Egypt"; thence southwards along the west bank of the River Medina to a place called "Dodnor"; thence in an imaginary straight line eastwards across the said river, and northwards along the east bank thereof in front of East Cowes to the buoy at Old Castle Point; thence northwards in an imaginary straight line to the West Bramble Buoy (being the point of junction of the limits of the several ports of Portsmouth, Southampton, and Cowes); thence south-westwards along the limits of the port of Southampton to a point opposite to, and north of, the starting point; and thence southwards to the said starting point. [Together with the waters of the port within such limits, and the place for the time being appointed as the Customs boarding station for such part of the port, and every other place for the time being appointed for the mooring or anchoring of ships for such part of the port, under any regulations for the prevention of the spread of diseases issued under the authority of the statutes in that behalf. Also the watersides of the districts of the Riparian authorities named in the order, with the docks, basins, &c., belonging to the part of the port above specified.]	West Cowes Local Board.	March 25th, 1883.
Dartmouth -	So much of the port as lies between an imaginary straight line drawn from Kingswear Castle across the River Dart to the Battery Point on the south, and another imaginary straight line drawn across the said river from Higher Noss Point to Higher Sand Quay Point on the north.	Dartmouth Town Council.	Ditto.
Dover - -	So much of the port as extends from the northern boundary of the borough of Deal to the southern boundary of the Local Government District of Walmer.	Deal Town Council -	Ditto.
Exeter - -	So much of the port of Exeter as lies between the bridge of the town of Exeter and the Cheekstone Rock. (Docks, basins, creeks, havens, and rivers running into the River Exe.)	Exeter Town Council	Ditto.
Falmouth and Truro.	So much of the port of Falmouth as lies within an imaginary straight line drawn from Zoze Point on the east to Pendennis Point on the west, together with the whole of the port of Truro.	(Joint Board) - - "The Falmouth and Truro Port Sanitary Authority."	Ditto.
Faversham -	So much of the port as lies east of Harty Ferry and west of an imaginary straight line drawn from Shellness Point to the eastern extremity of the Nagden Salt Marshes, including the river or haven of Faversham and the creek called Oare Creek.	Faversham Improvement Commissioners.	Ditto.
Fleetwood -	So much of the port as lies within an imaginary straight line drawn from Rossall Point to the Screw Pile Lighthouse, and from thence to Fluke Hall, near the north-eastern boundary of the township of Garstang. (Waters of the River Orwell abutting thereon included.)	Fleetwood Improvement Commissioners.	Ditto.

* Clauses to the same effect as those within brackets, but modified where necessary to meet the circumstances of the case, are contained in the orders issued to the other ports named on this page.

Port.	Extent of Jurisdiction.	Authority.	Date to which the powers of the Authority extend.
Gloucester (part of.) *	So much of the port as lies within the limits of the Gloucester and Berkeley Canal and the docks connected therewith. [Together with the waters of the port within such limits, and the place for the time being appointed as the Customs boarding station for such part of the port, and every other place for the time being appointed for the mooring or anchoring of ships for such part of the port, under any regulations for the prevention of the spread of diseases issued under the authority of the statutes in that behalf. Also the watersides of the districts of the Riparian authorities named in the order, with the docks, basins, &c. belonging to the part of the port above specified.]	Gloucester Town Council.	March 25th, 1883.
Gloucester (part of.	That part of the port, consisting of the River Wye and its tributaries, which lies to the north of an imaginary straight line drawn from the site of the Old Watchhouse at Beachley to Mathern Pill.	Chepstow Local Board.	Ditto.
Hartlepool	So much of the port as abuts on the Improvement Act District of West Hartlepool, the borough of Hartlepool, and the Local Government districts of Middleton in Stranton, and Throston.	(Joint Board) - - "The Hartlepool Port Sanitary Authority."	†
Harwich	So much of the port as lies within an imaginary straight line drawn from Languard Point to the southern boundary of the borough of Harwich on the sea shore.	(Joint Board) - - "The Harwich Port Sanitary Authority."	†
Hull	So much of the port as shall contain the harbour, docks, and wharves belonging to the town of Kingston-upon-Hull, and the waters of the said port abutting upon the said harbour, docks, and wharves.	Kingston-upon-Hull Town Council.	March 25th, 1883.
Ipswich	The port as constituted by an Order of the Lords Commissioners of Her Majesty's Treasury, dated 29th August 1878.	Ipswich Town Council.	Ditto.
Lancaster	So much of the port as lies within an imaginary straight line drawn from Sunderland Point to Cockersand Abbey.	Lancaster Town Council.	Ditto.
Liverpool	The whole of the port	Liverpool Town Council.	†
London	The whole of the port	The Mayor, Aldermen, and Commons of the City of London.	March 25th, 1883.‡
Lowestoft	So much of the port as lies between the Mutford Lock at the head of Lake Lothing Inner Harbour and the mouth of the new harbour of Lowestoft. Together with so much of the port as abuts upon the urban sanitary district of Lowestoft.	Lowestoft Improvement Commissioners.	†

* Clauses to the same effect as those within brackets, but modified where necessary to meet the circumstances of the case, are contained in the orders issued to the other Ports named on this page, with the omission, in the cases of Ipswich, Liverpool, and London, of the reference to the "part" of the port, and the omission in the cases of Hartlepool and Harwich of the words "for such part of" after the words "for the mooring and anchoring of ships, and the following further modifications:

The Ipswich order omits the reference to Customs boarding station, and also the last clause within the brackets. Instead of "Waters of the port within such limits," the Hartlepool and Harwich orders contain the words "Waters of the said Port abutting on such boundaries"; the Lowestoft order contains the words "Waters abutting on such part of the said Port"; and the Liverpool order contains the words "Waters of the said port."

† Constituted permanently by Provisional Order.

‡ The Mayor, Aldermen, and Commons of the City of London are constituted the Port Sanitary Authority by The Public Health Act, 1875, and the order of the Board merely assigns to them powers.

Port.	Extent of Jurisdiction.	Authority.	Date to which the powers of the Authority extend.
Lynn (part of)	So much of the port as commences at the junction near the upper roads of the Main Ship Channel from Sea with the Upper Bull Dog Channel, and is bounded thence on the east by the sea bank for the time being, and on the west by the fiscal limits of the port, as far as the northern end of the Norfolk Estuary Marsh Cut, and comprises the said cut, and the entire harbour of King's Lynn, as far as the Free Bridge over the Eau Brink Cut. [Together with the waters of the port within such limits, and the place for the time being appointed as the Customs boarding station for such part of the port, and every other place for the time being appointed for the mooring or anchoring of ships for such part of the port, under any regulations for the prevention of the spread of diseases issued under the authority of the statutes in that behalf. Also the watersides of the districts of the Riparian authorities named in the order, with the docks, basins, &c., belonging to the part of the port above specified.]	King's Lynn Town Council.	March 25th, 1883.
*			
Lynn (part of)	So much of the port as lies to the south of the Wells Fairway buoy and abuts upon the parish of Wells-next-the-Sea.	Wells Improvement Commissioners.	Ditto.
Milford - -	So much of the port as lies within an imaginary straight line drawn from St. Ann's Head to Blockhouse Point on the opposite coast.	(Joint Board) - - "The Milford Port Sanitary Authority."	†
Newcastle, N. Shields, and South Shields.	The whole of the port of Newcastle and so much of the ports of North Shields and South Shields as abuts on the coast line between Cullercoats and Herd Sand, together with so much of the said ports as forms part of the River Tyne.	(Joint Board) - - "The River Tyne Port Sanitary Authority."	†
Newhaven -	So much of the port as abuts upon the Local Government District of Newhaven.	Newhaven Local Board.	March 25th, 1883.
Newport -	The whole of the port - - - - - - - -	Newport (Mon.) Town Council.	Ditto.
New Shoreham	That part of the port extending from the western boundary of the parish of Hove, in the county of Sussex, to the western boundary of the parish of Lancing, in the same county, including the harbour or natural port of New Shoreham.	Guardians of the Poor of the Steyning Union.	Ditto.
North Shields	(*See* Newcastle, &c.)		
Penzance (part of).	That part of the port which lies within an imaginary straight line drawn from Cuddan Point on the east to Lamorna Cove on the west.	Penzance Town Council.	Ditto.
Penzance (part of).	So much of the port as lies within an imaginary straight line drawn from Carrack Gladdon Point on the west side of Saint Ives Bay to the eastern end of the Black Clift on the eastern side of the bay.	Hayle Local Board -	Ditto.
Plymouth .	So much of the port as lies to the north of an imaginary line following the southern side of the Plymouth Breakwater, and extended east and west from either end of the breakwater until it meets the shore.	(Joint Board) - - "The Plymouth Port Sanitary Authority."	†

* Clauses to the same effect as those within brackets, but modified where necessary to meet the circumstances of the case, are contained in the orders issued to the other Ports named on this page with the omission, in the case of Newport, of the reference to the "part" of the port, and the following further modifications:
Instead of "Waters of the port within such limits," the Lynn order (Wells Improvement Commissioners) and the New Shoreham order contain the words "Waters abutting on such part of the said port," and the Milford order contains the words "Waters of the said port within such straight line."

† Constituted permanently by Provisional Order.

Port.	Extent of Jurisdiction.	Authority.	Date to which the powers of the Authority extend.
Poole - - *	So much of the port as lies within an imaginary straight line drawn across the mouth of Poole Harbour from the easternmost side of North Haven to the easternmost side of South Haven. [Together with the waters of the port within such limits, and the place for the time being appointed as the Customs boarding station for such part of the port, and every other place for the time being appointed for the mooring or anchoring of ships for such part of the port, under any regulations for the prevention of the spread of diseases issued under the authority of the statutes in that behalf. Also the watersides of the districts of the Riparian authorities named in the order, with the docks, basins, &c., belonging to the part of the port above specified.]	Poole Town Council	March 25th, 1883.
Portsmouth -	That part of the port lying within and to the north of an imaginary straight line drawn from Gilkicker Point to South Sea Castle.	Portsmouth Town Council.	Ditto.
Preston - -	So much of the port as adjoins the district of the said Commissioners, with the dock commonly known as the New Dock.	Lytham Improvement Commissioners.	Ditto.
Rochester -	So much of the port as lies within an imaginary straight line drawn from the Cockleshell Hard Coastguard Station to Queenborough Spit, with so much of the River Medway beyond the said limits as is within the jurisdiction of the Rochester Town Council.	Rochester Town Council.	Ditto.
Southampton -	So much of the port as lies within an imaginary straight line drawn from Hill Head to the Bramble Buoy, and thence to Calshot Castle.	Southampton Town Council.	Ditto.
South Shields -	(*See* Newcastle, &c.)		
Sunderland -	So much of the port as abuts on the townships of Bishopwearmouth, Bishopwearmouth Pans, Ford, Fulwell, Hylton, Monkwearmouth, Monkwearmouth Shore, Ryhope, and Southwick, and on the parish of Sunderland.	(Joint Board) - - "The Sunderland Port Sanitary Authority."	†
Swansea - -	So much of the port as lies within an imaginary straight line drawn from Mumbles Point to the south-eastern boundary of the port.	Swansea Town Council.	March 25th, 1883.
Teignmouth -	So much of the estuary of the River Teign as lies between the sea and the bridge connecting Teignmouth with Shaldon.	Teignmouth Local Board.	Ditto.
Weymouth -	So much of the port as abuts upon the several parishes of Radipole, Melcombe Regis, Weymouth, Wyke Regis, and Portland.	(Joint Board) - - "The Weymouth Port Sanitary Authority."	†
Wisbech - -	The whole of the port. (With waters of the Wisbech, otherwise termed the Nene River, abutting on the Riparian districts named.)	Wisbech Town Council.	†
Workington -	So much of the port as lies within an imaginary straight line drawn across the mouth of the River Derwent from the extreme point of the northern bank to the extreme point of the southern bank of the river.	The Guardians of the Poor of the Cockermouth Union.	March 25th, 1883.

* Clauses similar in effect as those within brackets, but modified where necessary to meet the circumstances of the case, are contained in the orders issued to the other ports named in this page, with the omission, in the case of Wisbech, of the reference to the "part" of the port, and the following further modifications:
Instead of "Waters of the port within such limits," the Sunderland order contains the words "Waters of the said Port abutting on such boundaries," and the Weymouth order contains the words "Waters of the said Port abutting upon the said Parishes."

† Constituted permanently by Provisional Order.

No. 117.

STATEMENT showing—

I. The RURAL SANITARY AUTHORITIES in whose Districts portions of The Public Health Act, 1875, conferring Urban Powers, have been declared to be in force, during the year 1882.

II. PORTIONS of the Act declared to be in force.

III. The AREA in respect of which the Powers are conferred.

[For the year 1881, *see* Report No. XI., p. 467.]

I. Names of Unions, the Guardians of which are the Rural Sanitary Authority in each case.	II. Portions of the Act declared to be in force.	III. Area in respect of which Urban Powers are conferred.
Ashton-under-Lyne	Sections 112 and 113	The whole district.
Barton Regis	Section 161, first paragraph	The contributory place of Westbury-on-Trym.
Berkhampsteed	Sections 42 and 44, so much as is not already in force; sections 157 and 158; section 169, second and third paragraphs; and section 170.	The contributory places of Aldbury and Pightlesthorne, otherwise Pitstone.
Bolton	Section 161, first paragraph	The contributory places of Bradshaw, Harwood, Lostock, and Sharples.
Ditto	Sections 150, 151, 152, and 153	The contributory place of the No. 1 Special Drainage District, Halliwell and Heaton, so far as regards certain streets or parts of streets.
Ditto	Section 161, first paragraph	The contributory places of Edgworth, Entwistle, Longworth, and Quarlton, and within so much of the No. 1 Special Drainage District as is comprised in the Township of Great Lever.
Bromley	Section 161, first paragraph	The contributory place of Foot's Cray.
Chard	Sections 25 and 39; section 44; so much as is not already in force; and sections 157 and 158.	The contributory place of Crewkerne.
Conway	Section 172	The Eirias and Llandrillo yn Rhos Special Drainage Districts.
	Section 147	The Llandrillo yn Rhos Special Drainage District.
Corwen	Sections 42 and 44, so much as is not already in force; sections 157 and 158.	The contributory places of Cerrig y Druidion, Corwen, Glyn Traian, Gwyddelwern, Llandrillo, Llangollen Traian, and Llansaintffraidglyn Ceiriog.
Cuckfield	Sections 42 and 44, so much as is not already in force; sections 157, and 158; section 169, second and third paragraphs; and section 170.	The contributory places of Ardingley, Balcomb, Clayton, Cowfold, Cuckfield, Horsted Keynes, Hurstpierpoint, Keymer, Lindfield and Slaugham.
Doncaster	Section 25; section 44, so much as is not already in force; section 47 (1) and (2); sections 155, 156, 157, and 158; section 160 (1) and (3); and section 161, first paragraph.	The contributory places of Bentley with Arksey, Conisbrough, and Dannaby or Denaby.

I.	II.	III.
Names of Unions, the Guardians of which are the Rural Sanitary Authority in each case.	Portions of the Act declared to be in force.	Area in respect of which Urban Powers are conferred.
Doncaster—(*cont.*)	Section 25; section 44, so much as is not already in force; section 47 (1) and (2); sections 155, 156, 157, and 158; and section 160 (1) and (3).	The contributory place of Bolton-upon-Dearne.
	Section 161	The contributory places of Balby with Hexthorpe and the Hexthorpe Special Drainage District.
Durham	Section 160 (1)	The contributory place of Crossgate.
Glendale	Section 42, so much as is not already in force.	The contributory place of Wooler.
Gower	Section 44, so much as is not already in force; and sections 157 and 158.	The contributory place of Oystermouth.
Guildford	Section 44, so much as is not already in force; and sections 157 and 158.	The contributory places of Charterhouse, Crownpits, and Farncombe Special Drainage Districts.
Hunslet	Section 25; section 26 (except subsection 2); section 47: sections 112, 113, 114, and 115; section 157 (so much as is not already in force); and section 158.	The whole of the district.
Huntingdon	Sub-sections (2), (3), and (4) of section 157; and section 158.	The contributory places of Alconbury, Alconbury Weston, Brampton, Hartford, Sawtry All Saints, Sawtry Saint Andrew, and Sawtry Saint Judith.
Kingston	Section 42, so much as is not already in force; section 161, first paragraph.	Kingston Special Drainage District.
Ludlow	Section 44, so much as is not already in force; sections 157 and 158; section 169, second and third paragraphs; and section 170.	The contributory places of Bromfield, Halford, Ludford, Stanton Lacy, Stokesay, and the Leintwardine Special Drainage District.
Macclesfield	Section 169, second and third paragraphs; and section 170.	The contributory places of Bollington, Butteley, Chelford, Chorley, Hurdsfield, Poynton, Prestbury, Rainow, Sutton, Tytherington, Upton, and Worth.
Ditto	Ditto	Poynton-with-Worth.
Malling	Sections 42 and 44, so much as is not already in force; and sections 157 and 158.	The contributory place of Birling.
Midhurst	Section 42, so much as relates to the proper watering of streets.	The contributory place of Midhurst.
Milton	Section 44, so much as is not already in force; and sections 157 and 158.	The contributory place of Rainham.
Nantwich	Section 160, first paragraph	The contributory places of Audlem, Bunbury, Coppenhall Church, Haslington, and Willaston.
Neath	Section 161, first paragraph	The contributory place of Glyncorwg.
Newton Abbot	Section 161, first paragraph	The contributory place of Bovey Tracey.
Northwich	Sections 157 and 158	The contributory places of Clive, Kinderton cum Hulme, Leftwich, Marbury, Newton, Shurlach, and Winnington.
Northampton	Section 161, first paragraph	The contributory place of Kingsthorpe.

I.	II.	III.
Names of Unions, the Guardians of which are the Rural Sanitary Authority in each case.	Portions of the Act declared to be in force.	Area in respect of which Urban Powers are conferred.
Orsett	Sections 42 and 44, so much as is not already in force; and sections 157 and 158	The contributory places of Aveley, Chadwell Saint Mary's, and West Tilbury.
Penzance	Section 154, so far as the same is required to enable the Sanitary Authority to make a new road from the commencement of Newlyn Green Road in the Village of Newlyn, to a point known as Jack Lanein the road running from Penzance through the Village of Newlyn to the western portion of the Penzance Union.	The contributory place of Paul.
Peterborough	Section 114	The contributory place of Fletton.
Petersfield	Section 169, first paragraph	The contributory place of Petersfield.
Ditto	Sections 157 and 158	Ditto.
Pontypridd	Section 66 and section 32 of the Town Police Clauses Act, 1847, such section being incorporated with section 171 (2).	The contributory place of Eglwysilan.
Prestwich	Sections 150 and 152	The contributory place of Newton, so far as regards Albert Grove, East Road, Kirkmanshulme Lane, Norman Grove, North Road, Peel Grove, Queen's Grove, Stanley Grove.
Ripon	Section 44, so much as is not already in force; and sections 45, 157, and 158.	The contributory places of Bishopton, Sharrow, and Whitcliffe-with-Thorpe.
Saint Neot's	Section 32 of the Towns Police Clauses Act, 1847, such section being incorporated with section 171 (2) of the Public Health Act, 1875.	Kimbolton contributory place.
Totnes	Sections 42 and 44, so much as is not already in force; and sections 157 and 158.	The contributory place of Buckfastleigh.
Wallingford	Sections 157 and 158	The contributory place of East Hagborne.
West Derby	Sections 157 and 158	The contributory places of Aintree, Croxteth Park, Fazakerley, Ince Blundell, Kirkby, Lunt, Netherton, Orrell and Ford, Sephton, and Thornton.
Wetherby	Sections 42 and 44, so much as is not already in force; and sections 157 and 158.	The contributory place of Thorner.
Whitehaven	Section 161, first paragraph	The contributory place of Hensingham.
Wirrall	Section 171 (2)	The contributory places of the Hoylake Special Drainage District and West Kirby.
Witney	Section 44, so much as is not already in force; and section 47 (1) and (2).	The contributory places of Bampton with Weald, Burford, and Ensham.
Wrexham	Section 20	The contributory place of Brymbo.
York	Sections 39, 66, 112, 113, 114, 150, 151, 152, 153, 155, and 156; section 169, second and third paragraphs; and section 170.	The contributory places of Clifton, Dringhouses, Gate Fulford, Heworth, Holgate, and Saint Olave, Mary Gate.

No. 118.

SPECIAL DRAINAGE DISTRICTS CONSTITUTED during the Year 1882.

Name of District.	Area of District.	County.	Date of Authority for formation.
			1882.
Charterhouse - -	Part of th Parish of Godalming.	Surrey - -	21 April.
Crownpits - - -	Ditto ditto -	Ditto -	21 April.
Farncombe - - -	Ditto ditto -	Ditto -	21 April.
Saint Bees - - -	Part of the Townships of Preston Quarter, Rottington, and Saint Bees, and of the Chapelry of Hensingham.	Cumberland -	9 May.
Wimborne Minster -	Part of the Parish of Wimborne Minster.	Dorset - -	26 July.

SPECIAL DRAINAGE DISTRICTS DISSOLVED during the Year 1882.

Name of District.	Area of District.	County.	When dissolved.
			1882.
Ifield Special Drainage District.	Part of the Parish of Ifield - -	Sussex - -	30 January.
Farncombe Special Drainage District.	Part of the Parish of Godalming -	Surrey - -	10 April.
Wimborne Minster Special Drainage District.	Part of the Parish of Wimborne Minster.	Dorset - -	6 July.

No. 119.—Abstract of Reports of Public Analysts

	Milk.		Bread.		Flour.		Butter.		Coffee.		Sugar.		Mustard.		Pickles.		Jam.	
	No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.	
	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.
The Metropolitan District	2040	499	340	6	193	1	400	74	435	83	167	0	339	51	23	1	63	10
Counties.																		
Bedford	19	0	31	0	22	0	29	0	15	0	2	0	18	7	2	0	–	–
Berks	17	1	3	0	–	–	–	–	13	0	11	0	–	–	–	–	–	–
Bucks	–	–	20	8	–	–	7	2	4	2	–	–	1	0	–	–	4	0
Cambridge	13	0	18	4	2	0	–	–	1	0	1	0	1	0	–	–	1	0
Chester	246	32	29	0	6	0	19	3	56	16	3	0	36	6	–	–	5	0
Cornwall	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cumberland	12	1	–	–	3	0	–	–	6	0	2	0	7	1	–	–	–	–
Derby	87	19	6	3	3	0	3	1	11	6	–	–	4	0	–	–	–	–
Devon	33	7	8	0	11	0	37	10	1	0	2	0	–	–	–	–	–	–
Dorset	5	1	–	–	–	–	1	0	–	–	–	–	–	–	–	–	–	–
Durham	213	25	2	0	17	0	22	3	16	4	–	–	17	2	–	–	11	0
Essex	143	45	51	3	8	0	28	4	16	2	21	0	28	9	–	–	–	–
Gloucester	171	22	92	0	9	0	41	2	85	4	55	0	96	4	–	–	–	–
Hereford	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Herts	–	–	1	0	–	–	–	–	2	0	–	–	2	0	–	–	–	–
Hunts	–	–	21	9	6	0	3	0	2	0	–	–	2	0	–	–	–	–
Kent	117	26	47	8	1	0	90	13	81	20	–	–	69	15	5	0	2	0
Lancaster	1624	309	115	1	46	0	76	11	59	24	4	0	38	23	–	–	22	0
Leicester	36	0	75	4	33	1	36	3	20	3	–	–	–	–	–	–	–	–
Lincoln	28	6	72	7	4	0	3	1	29	6	4	0	29	10	–	–	–	–
Middlesex	122	34	11	0	13	0	15	0	19	2	7	0	19	5	1	0	7	0
Monmouth	40	7	–	–	–	–	1	1	4	1	–	–	6	1	–	–	–	–
Norfolk	60	6	40	3	7	0	6	2	3	0	–	–	10	9	–	–	–	–
Northampton	27	1	29	6	–	–	–	–	14	2	–	–	2	0	–	–	–	–
Northumberland	48	10	16	0	23	0	–	–	–	–	–	–	–	–	–	–	–	–
Nottingham	30	6	39	6	4	0	1	0	6	2	–	–	–	–	–	–	–	–
Oxford	125	18	–	–	–	–	2	1	–	–	–	–	–	–	–	–	–	–
Rutland	9	1	5	1	–	–	–	–	1	0	–	–	–	–	–	–	–	–
Shropshire	10	2	1	0	1	0	–	–	2	0	–	–	–	–	–	–	–	–
Somerset	154	6	3	0	3	0	105	0	33	3	11	0	57	10	–	–	7	0
Southampton	258	40	9	0	5	0	44	2	12	8	1	0	2	1	–	–	13	0
Stafford	271	48	19	0	41	1	53	11	289	47	–	–	26	5	–	–	–	–
Suffolk	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–
Surrey	175	26	8	0	2	0	47	6	44	2	–	–	28	2	1	0	2	0
Sussex	143	38	34	8	7	0	60	4	34	3	2	0	8	2	6	0	16	3
Warwick	340	104	11	0	31	0	22	4	76	17	1	0	82	6	–	–	1	0
Westmoreland	6	0	–	–	–	–	–	–	1	0	–	–	1	0	–	–	–	–
Wilts	10	0	7	0	–	–	11	1	7	0	–	–	2	1	–	–	–	–
Worcester	42	5	20	0	2	0	11	0	20	3	–	–	9	0	–	–	–	–
York, E. Riding	59	10	2	0	–	–	12	4	10	4	1	0	–	–	–	–	–	–
,, N. Riding	20	2	–	–	1	0	3	1	2	1	–	–	–	–	–	–	–	–
,, W. Riding	284	51	17	0	10	0	29	6	17	7	–	–	16	1	–	–	3	0
Wales.																		
Anglesey	2	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brecknock	12	3	–	–	–	–	–	–	–	–	–	–	1	0	–	–	–	–
Cardigan	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Carmarthen	14	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Carnarvon	4	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Denbigh	2	0	1	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Flint	5	3	–	–	–	–	1	0	1	0	–	–	–	–	–	–	–	–
Glamorgan	249	18	1	0	9	0	19	2	38	5	1	0	12	2	–	–	1	0
Merioneth	4	1	–	–	–	–	–	–	2	1	–	–	–	–	–	–	–	–
Montgomery	3	0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Pembroke	8	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Radnor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Totals	7341	1440	1204	77	523	3	1238	173	1487	278	296	0	968	173	38	1	158	13

FOR THE YEAR 1882, ENGLAND AND WALES.

Confectionery.		Wines.		Beers.		Gin.		Other Spirits.		Drugs.		Other Articles.		TOTAL.				
No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.		No. of Samples.				
Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Examined.	Adulterated.	Proportion Adulterated. 1882	Proportion Adulterated. 1881	
73	0	16	1	118	1	75	13	123	6	65	0	931	45	5401	791	14·6	13·4	THE METROPOLITAN DISTRICT.
																		COUNTIES.
10	0	–	–	2	0	19	3	24	1	3	0	96	1	292	12	4·1	8·4	Bedford.
2	0	–	–	2	0	4	0	–	–	–	–	15	0	67	1	1·5	9·7	Berks.
4	0	–	–	27	8	–	–	–	–	1	0	18	1	86	21	24·4	41·6	Bucks.
–	–	1	0	–	–	2	0	–	–	1	0	8	0	49	4	8·1	5·5	Cambridge.
4	0	2	0	19	0	51	5	149	27	24	9	119	5	768	103	13·4	19·4	Chester.
–	–	–	–	–	–	–	–	–	–	–	–	1	0	2	1	50·0	33·3	Cornwall.
3	0	–	–	–	–	6	3	29	6	–	–	25	0	93	11	11·8	19·3	Cumberland.
–	–	–	–	–	–	8	3	25	16	12	4	10	0	169	52	30·8	22·0	Derby.
2	0	–	–	4	0	5	0	2	2	10	1	14	0	129	20	15·5	24·5	Devon.
–	–	–	–	–	–	2	2	2	2	–	–	–	–	10	5	50·0	55·5	Dorset.
4	0	–	–	1	0	21	11	89	40	35	14	90	7	538	106	19·7	19·9	Durham.
1	0	–	–	–	–	85	30	19	3	5	0	56	2	461	98	21·2	14·2	Essex.
1	0	–	–	15	3	10	3	5	1	3	0	164	1	747	40	5·3	3·8	Gloucester.
–	–	–	–	–	–	–	–	–	–	–	–	–	–	—	–	—	—	Hereford.
–	–	–	–	–	–	–	–	–	–	2	0	4	0	11	0	0·0	—	Herts.
–	–	–	–	2	0	–	–	–	–	–	–	21	1	57	10	17·5	17·2	Hunts.
–	–	–	–	14	1	66	18	74	20	–	–	66	3	632	124	19·6	18·6	Kent.
32	0	9	0	87	10	104	23	250	64	65	12	202	19	2740	496	18·1	18·5	Lancaster.
–	–	–	–	18	0	14	2	14	4	–	–	41	1	287	18	6·3	10·7	Leicester.
–	–	–	–	2	0	31	11	11	2	6	0	42	0	261	43	16·5	14·4	Lincoln.
–	–	–	–	13	0	20	1	35	2	16	0	51	3	349	47	13·5	21·8	Middlesex.
–	–	–	–	1	0	1	0	1	1	–	–	8	0	62	11	17·7	5·1	Monmouth.
–	–	2	0	3	0	5	4	2	0	–	–	15	6	153	30	19·6	14·0	Norfolk.
–	–	–	–	17	1	1	0	2	1	–	–	14	0	106	11	10·4	13·4	Northampton.
–	–	–	–	–	–	5	1	19	7	–	–	5	0	116	18	15·5	14·8	Northumberland.
–	–	–	–	3	0	1	0	1	0	–	–	4	1	89	15	16·8	15·9	Nottingham.
–	–	–	–	3	0	–	–	–	–	–	–	–	–	130	19	14·6	17·1	Oxford.
–	–	–	–	–	–	1	1	2	1	–	–	2	0	20	4	20·0	—	Rutland.
–	–	–	–	3	0	2	0	–	–	–	–	2	0	21	2	9·5	—	Shropshire.
14	0	5	0	23	0	59	11	71	10	16	0	196	1	757	41	5·4	5·1	Somerset.
2	0	–	–	1	0	53	5	75	21	3	0	23	0	501	77	15·4	19·1	Southampton.
–	–	–	–	4	1	15	5	10	3	2	0	397	20	1037	141	13·6	12·3	Stafford.
–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	100·0	28·5	Suffolk.
11	0	–	–	–	–	63	12	125	43	4	0	68	8	578	99	17·1	19·0	Surrey.
–	–	–	–	26	0	21	2	36	11	12	0	47	3	452	74	16·4	13·1	Sussex.
3	0	–	–	11	0	–	–	5	2	–	–	90	2	673	135	20·0	25·8	Warwick.
–	–	–	–	–	–	1	1	1	1	–	–	2	0	12	2	16·7	11·1	Westmoreland.
3	0	–	–	6	0	9	3	13	3	–	–	6	1	74	9	12·2	20·9	Wilts.
–	–	–	–	15	0	1	0	1	0	–	–	27	0	148	8	5·4	11·2	Worcester.
–	–	–	–	–	–	4	3	2	0	12	4	6	0	108	25	23·1	18·3	York, E. Riding.
–	–	–	–	–	–	2	0	2	0	–	–	25	0	55	4	7·3	9·6	„ N. Riding.
6	0	–	–	2	0	7	4	12	5	62	6	77	8	542	88	16·2	16·1	„ W. Riding.
																		WALES.
–	–	–	–	1	1	1	0	1	1	–	–	1	0	6	2	33·3	26·6	Anglesey.
–	–	–	–	–	–	6	2	11	4	–	–	1	0	31	9	29·0	45·4	Brecknock.
–	–	–	–	2	0	7	4	3	1	–	–	–	–	12	5	41·7	45·0	Cardigan.
–	–	–	–	–	–	–	–	3	2	–	–	–	–	17	3	17·6	13·3	Carmarthen.
–	–	–	–	–	–	–	–	4	3	–	–	–	–	8	6	75·0	33·3	Carnarvon.
–	–	–	–	1	0	11	3	14	6	3	0	32	9	28·1	25·0	Denbigh.
–	–	–	–	1	1	20	5	1	0	4	0	33	9	27·3	40·6	Flint.
–	–	–	–	1	0	2	2	41	20	13	0	36	3	423	52	12·3	8·4	Glamorgan.
–	–	–	–	–	–	–	–	11	9	–	–	2	0	19	11	57·9	55·9	Merioneth.
–	–	–	–	–	–	–	–	–	–	–	–	–	–	3	0	0·0	—	Montgomery.
–	–	–	–	25	0	11	1	20	4	–	–	–	–	64	7	10·9	23·0	Pembroke.
–	–	–	–	1	0	3	1	3	0	–	–	–	–	7	1	14·3	25·0	Radnor.
182	0	35	1	470	26	808	191	1359	357	387	56	2945	142	19,439	2931	15·07	14·67	TOTALS.

No. 120.

Report on Examinations of Tea made under § 30 of the Sale of Food and Drugs Act, 1875.

To the Commissioners of Her Majesty's Customs.

Honourable Sirs,

I have to report particulars respecting the analyses of the samples of tea which have, under the Adulteration Act, been received at this aboratory during the year 1882. The number of samples received was 941, of which—

720	were	faced greens.
34	„	unfaced greens.
50	„	capers.
109	„	congous.
28	„	dust and fannings.
941		

The teas represented by 925 of these samples, not coming within the restrictions of the Act, were delivered by the analyst, and passed into home consumption. The remainder being of inferior quality were referred to the board for directions as to their disposal, and dealt with in the following manner:

The contents of 112 packages were destroyed, they being false packed, the upper layer being common congou and the lower the leaves of the Eunga Chinensis. Fifty-two packages were also seized as unfit for human food, 50 of which were China teas from St. Nazaire; these were composed of about one-half of foreign leaves besides being heavily faced with mineral matter, of which Prussian blue formed a part. The remaining two packages contained packets of Indian teas, which had been packed damp and become rotten, while 88 packages of low China greens were restricted to exportation.

The following is a table of comparison of the analyses of the last five years:—

	1878.	1879.	1880.	1881.	1882.
Samples analysed - -	639	575	2,844	1,242	941
Delivered by analyst - -	592	558	2,440	990	925
Reported to the Board - -	47	17	404	252	16
Delivered for home consumption by the Board.	24	15	84	14	—
Restricted to exportation - -	19	1	276	222	2
Representing Packages -	15,372	82	36,115	44,443	88
Seized - - - - -	4	1	44	16	14
Representing Packages -	6	1	6,225	1,153	164

It will thus be seen that there has, compared with the two previous years, been a great diminution in the importation of spurious and inferior teas during 1882, a circumstance attributable to the salutary check, which, under the operation of the Act, is afforded in this Department.

Respectfully,

Tea Laboratory,
2nd February 1883.

(Signed) G. EXCELL,
Analyst.

No. 121.

EXTRACT from LETTER from the PRINCIPAL CHEMICAL OFFICER of the COMMISSIONERS of INLAND REVENUE, as to MILK STANDARDS.

WE have felt ourselves unable to adopt the "definitions" and "limits" for genuineness laid down by the Society of Public Analysts, for the simple but all-sufficient reason that they are not borne out by our own analyses of hundreds of samples known to be genuine. In this view we are supported by many eminent analysts, including some of the members of the society in question, although that society still nominally adheres to the "limits" laid down. Take, for instance, the limit referred to of 9·0 per cent. for "solids, not fat," in milk.

In a report recently made to that society by one of its members, Dr. C. A. Cameron, analyst for the City of Dublin, and for several Irish Counties, it is stated that in an examination of the milk of 42 cows, "in 25 instances the solids, *minus* fat, were less than 9 per cent," and "so far as house-fed cattle in Ireland are concerned, 9 per cent. "of solids, *minus* fat, should be reduced to 8·5 per cent."

Another member of that society, Mr. Bernard Dyer, after an investigation into the quality of the milk of two cows in Sussex, in which he found the "solids not fat" fall as low as 8·4 per cent., says, "the fact "that an individual cow in good health and well-fed can frequently "give milk, yielding on an average only 8·7 per cent. of 'solids, not "fat,' should make us cautious in giving certificates of adulteration."

Other instances to the same effect could be given.

In the Report of the Committee of the House of Commons upon which the present "Sale of Food and Drugs Act, 1875," is founded, it is stated that the good results from the working of the Act then in force "have not been attained without some serious cases of injury and "injustice to milk-sellers. Too high and rigid a standard has been "fixed by some analysts, and no sufficient allowances have been made "for the natural variations in milk."

No. 122.

TABLE showing the NUMBER of WORKS in each COUNTY of ENGLAND and WALES, SCOTLAND, and IRELAND, registered under the Alkali, &c. Works Regulation Act, 1881, in the year 1882.

COUNTY.	Alkali.	Sulphuric Acid.	Chemical Manure.	Gas Liquor.	Nitric Acid.	Sulphate and Muriate of Ammonia.	Chlorine.	Extraction of Salt from Brine.	Cement.	Total.
ENGLAND AND WALES.										
Bedford	..	..	..	..	..	1	..	..	..	1
Berks	..	..	1	..	..	3	..	..	..	4
Bucks	..	..	1	..	..	..	..	..	..	1
Cambridge	..	..	5	..	..	1	..	..	..	6
Chester	6	1	7	1	3	1	..	67	1	87
Cornwall	1	1	5	..	..	6	..	..	..	13
Cumberland	..	1	11	..	..	2	..	..	..	14
Derby	..	1	1	..	..	3	..	..	1	6
Devon	..	2	9	..	..	8	..	..	3	22
Dorset	..	..	1	..	..	1	..	..	1	3
Durham	16	..	5	..	..	7	..	..	7	35
Essex	3	4	15	..	2	2	1	..	7	34
Gloucester	3	2	9	..	..	5	..	..	..	19
Hants	..	1	3	..	..	3	..	..	5	12
Hereford	..	..	1	..	..	..	..	..	..	1
Hertford	..	..	..	..	..	1	..	..	..	1
Huntingdon	..	..	1	..	..	..	..	..	..	1
Kent	..	1	5	..	..	14	..	..	35	55
Lancaster	49	8	16	2	17	28	1	..	1	122
Leicester	..	..	4	..	..	1	..	..	..	5
Lincoln	..	..	9	2	..	2	..	..	..	13
Middlesex	4	3	7	..	3	5	..	..	6	28
Monmouth	..	2	..	..	..	..	..	..	..	2
Norfolk	..	..	11	..	..	1	..	..	1	13
Northampton	..	..	..	..	..	1	..	..	..	1
Northumberland	4	2	10	1	..	2	..	2	4	25
Nottingham	1	2	4	..	1	1	..	..	..	9
Oxford	..	..	3	..	..	..	..	..	..	3
Salop	..	..	4	..	..	1	1	..	..	6
Somerset	..	..	5	..	..	5	..	..	2	12
Stafford	2	2	10	..	1	4	1	2	4	26
Suffolk	..	..	10	..	..	1	..	1	1	13
Surrey	1	..	5	..	1	3	..	..	..	10
Sussex	..	1	..	1	..	3	..	..	..	5
Warwick	1	4	4	..	4	1	..	..	5	19
Westmorland	..	..	..	..	..	1	..	..	..	1
Wiltshire	..	..	1	..	..	7	..	..	..	8
Worcester	2	..	1	1	1	..	1	2	..	8
Yorkshire	21	10	32	9	13	16	..	..	4	105
Anglesey	..	..	1	..	..	..	..	..	..	1
Carmarthen	..	4	..	1	..	..	..	..	..	5
Carnarvon	..	..	..	..	..	1	..	..	..	1
Denbigh	..	..	..	..	1	1	..	..	..	2
Flint	3	1	..	..	..	1	..	..	2	7
Glamorgan	2	13	2	..	..	4	..	..	..	21
Total	119	66	219	18	47	148	5	74	90	786

TABLE showing the Number of Works in each County of England and Wales, Scotland, and Ireland, registered under the Alkali, &c. Works Regulation Act, 1881, in the year 1882—*continued.*

COUNTY.	Alkali.	Sulphuric Acid.	Chemical Manure.	Gas Liquor.	Nitric Acid.	Sulphate and Muriate of Ammonia.	Chlorine.	Extraction of Salt from Brine.	Cement.	Total.
SCOTLAND.										
Aberdeen	..	2	5	..	..	1	..	..	..	8
Ayr	3	..	4	..	1	2	..	..	..	10
Banff	..	..	5	..	..	..	..	..	..	5
Berwick	..	..	1	..	..	..	..	..	..	1
Clackmannan	..	..	1	..	..	..	..	..	..	1
Dumbarton	1	..	..	..	..	..	..	..	..	1
Dumfries	..	..	..	..	..	1	..	..	..	1
Edinburgh	..	2	6	..	..	4	..	2	..	14
Elgin	..	..	1	..	..	..	..	..	..	1
Fife	..	1	2	..	..	4	..	3	..	10
Forfar	..	..	5	..	..	2	..	..	..	7
Haddington	..	..	1	..	..	..	..	2	..	3
Inverness	..	..	1	..	..	1	..	..	..	2
Kirkcudbright	..	..	1	..	..	..	..	..	..	1
Lanark	9	2	7	2	..	8	..	..	..	28
Linlithgow	..	1	3	..	..	4	..	1	..	9
Moray	..	1	1	..	..	..	..	..	..	2
Perth	1	..	4	..	..	1	..	..	..	6
Renfrew	1	2	3	2	..	6	..	..	1	15
Ross	..	..	1	..	..	..	..	..	..	1
Roxburgh	..	..	2	..	..	..	..	..	..	2
Stirling	1	3	..	..	..	1	..	..	..	5
TOTAL	16	14	54	4	1	35	—	8	1	133
IRELAND.										
Antrim	1	1	3	..	..	2	..	1	..	8
Armagh	..	..	1	1	..	1	..	..	..	3
Cork	..	..	2	..	..	2	..	1	..	5
Dublin	2	1	5	..	..	1	..	1	..	10
Down	..	..	..	..	..	1	..	1	..	2
Kilkenny	..	..	..	..	..	1	..	2	..	3
Louth	..	..	1	..	..	1	..	6	..	8
Limerick	..	..	..	..	..	1	..	1	..	2
Londonderry	..	..	3	..	..	1	..	..	..	4
Waterford	..	..	1	..	..	..	..	..	..	1
Wicklow	..	..	2	..	..	..	..	..	..	2
TOTAL	3	2	18	1	—	11	—	13	—	48
GRAND TOTAL—ENGLAND AND WALES, SCOTLAND, AND IRELAND	138	82	291	23	48	194	5	95	91	967

Appendix L.

Allowances, Disallowances, and Surcharges.

Page

No. 123. Disallowances and Surcharges made by District Auditors during the Year ended 31st December 1882 - 448

No. 124. Appeals against Allowances, Disallowances, and Surcharges - - - - - - 449

No. 123.

DISALLOWANCES AND SURCHARGES MADE BY DISTRICT AUDITORS DURING THE YEAR ENDED 31ST DECEMBER 1882.

In the Accounts of—	
Parish officers, guardians of the poor and union officers, managers of district schools and their officers - -	4,034
Urban Sanitary Authorities and their officers - -	888
Rural Sanitary Authorities and their officers - - -	145
School boards and their officers - - - -	688
Highway boards and their officers - - - -	162
Surveyors of highways and boards for repair of the highways in highway parishes - - - - -	1,144
TOTAL NUMBER OF DISALLOWANCES AND SURCHARGES -	7,061

No. 124.

Appeals against Allowances, Disallowances, and Surcharges.

Description of Appellants.	Appeals against Disallowances and Surcharges.				Appeals against Allowances.		Total.
	Confirmed and Remitted.	Confirmed and Not Remitted.	Reversed.	Declared Null and Void.	Confirmed.	Reversed.	
Parish officers:							
Overseers	587	53	61	—	—	—	701
Assistant overseers	3	1	2	—	—	—	6
Guardians and union officers:							
Guardians	293	8	39	3	—	—	343
Clerks to guardians	31	—	1	—	—	—	32
Masters of workhouses	33	2	2	—	—	—	37
Relieving officers	95	2	12	—	—	—	109
Treasurers	7	—	1	—	—	—	8
Infirmary steward	1	—	—	—	—	—	1
Collector	1	—	—	—	—	—	1
Superintendent of district schools	2	—	—	—	—	—	2
Urban Sanitary Authorities and their officers:							
Members of Local Boards and Improvement Commissioners	174	3	19	—	—	—	196
Clerks	5	—	—	—	—	—	5
Treasurers	37	—	1	—	—	—	38
Collectors	5	—	1	—	—	—	6
Surveyors	4	—	—	—	—	—	4
Engineers of gasworks	2	—	—	—	—	—	2
Rural Sanitary Authorities and their officers:							
Members	72	3	9	1	—	—	85
Clerks	1	—	—	—	—	—	1
Treasurers	10	—	—	—	—	—	10
Surveyor	1	—	—	—	—	—	1
School boards and their officers:							
Members	104	—	13	1	—	—	118
Clerks	29	—	1	—	—	—	30
Treasurers	22	1	6	—	—	—	29
Schoolmasters	3	—	1	—	—	—	4
Schoolmistress	1	—	—	—	—	—	1
School managers and their officers:							
Managers	3	—	1	—	—	—	4
Treasurers	3	—	—	—	—	—	3
Highway boards and their officers:							
Members	43	1	7	—	—	—	51
Clerk	3	—	1	—	—	—	4
Treasurers	4	—	—	—	—	—	4
District surveyors	8	—	3	—	—	—	11
Surveyors of highway parishes	403	28	6	—	—	—	437
Clerk to managers of school district	1	—	—	—	—	—	1
							2285

Appendix M.

Orders.

	Page
No. 125. Orders issued, Year 1882:—	
Poor Law and the Poor Rate - - -	452
Local Government and Public Health -	455
No. 126. General Orders issued, Year 1882 - - -	457

No. 125.

ORDERS ISSUED by the LOCAL GOVERNMENT BOARD, during the Year 1882.

SUBJECTS OF ORDERS.	Number issued.
POOR LAW AND THE POOR RATE.	
Accounts—	
Casual Wards. (Included under "Regulations.")	
Demand Note for payment of Rates	1
Infirmary. (Included under "Regulations.")	
Workhouse for children. (Ditto.)	
Adjustment of Interests—	
Annexation to Union	5
Separation from Union	2
Dissolution of Union	2
Appropriation of moneys received	5
Adjustment of Liabilities under Section 8 of "The Divided Parishes and Poor Law Amendment Act, 1876"	4
Assessment—	
Map	1
Casual Wards: Regulations. (Included in "General Orders.")	
Collectors of Poor Rates and Assistant Overseers—	
Appointments, Duties, Salaries, and Districts	37
Common Fund—	
Basis of Contribution	5
Compulsory purchase; Lands Clauses Act	1
County (change of). *See* "Parishes."	
Debts—	
Extending time for Payment	120
Demand Note for payment of Rates. (*See* "Accounts.")	
Dietary—	
Prescribing for Workhouse Inmates	2
Dispenser (Out-door), duties of. (Included in "General Orders.")	
District Auditors—	
Assignment of Districts and Duties	18
Additions to Districts	14
Decisions on appeals against Allowances, Disallowances, and Surcharges*	180
Divided Parishes. (*See* "Parishes.")	
Carried forward	397

* These include the cases of School Boards.

Subjects of Orders.	Number issued.
Poor Law and the Poor Rate—*continued.*	
Brought forward	397
Election of Guardians or Managers—	
Triennial Election of Guardians (Poll)	28
Ditto ditto (Adoption of)	21
Dividing into Wards for Election of Guardians	3
Ditto under section 9 of The Public Health Act, 1875	7
Altering Name of Ward	1
Appointment of Person to decide objections to claims of owners to vote (7 & 8 Vict. c. 101. s. 15)	1
Supplying Vacancies	101
Deciding Questions as to disputed Elections	13
Rescinding Declaration Orders as regards total number of Guardians	16
Uniting small Parishes for Election of Guardians	17
Altering Number, other than in any of the above cases	37
Remuneration of Returning Officer, Suspending. (Included in "General Orders.")	
Emigration—	
Authorising Expenditure	60
General Orders (for particulars, *see* Table at page 457.)	7
Highway Areas (change of). (*See* "Parishes.")	
Loans—	
Redemption of Balances	1
Local Acts—	
Alteration or Repeal of. (Included in "Provisional Orders.")	
Medical Fees—	
Suspending. (Included in "General Orders.")	
Officers —	
Compensation for loss of Office	4
Determination of Appointment	1
Dismissals	17
Parishes—	
Alteration of name	1
Proceedings under "Divided Parishes and Poor Law Amendment Act, 1876," or Acts amending and extending the same :	
(1.) Amalgamating with adjoining Parishes	4
(2.) Amalgamating detached parts with adjoining Parishes	92
(3.) Ditto with change of County	9
(4.) Ditto with change of Highway District	10
(5.) Ditto ditto and amalgamation with Highway Parish	1
(6.) Ditto Parishes	3
(7.) Constituting separate Parish	1
Parochial Offices	28
Property of Unions or Separate Parishes—	
Sale, Letting, or Exchange	19
Appropriation of Sale Produce	13
Property of Parishes in Unions—	
Sale, Letting, or Exchange	66
Appropriation of Sale Produce. (*See also* "Adjustment of Interests.")	42
Exhausted Parish Lands. Sale	5
Do. do. Appropriation of Sale Produce	6
Carried forward	1,032

Subjects of Orders.	Number issued.
Poor Law and the Poor Rate—*continued.*	
Brought forward - - - -	1,032
Property of School or Sick Asylum District—	
Sale - - - - - -	1
Appropriation of Sale Produce - - - -	1
Regulations—	
Casual Wards (Accounts) - - - -	1
Out-door Dispensaries - - - - -	2
Separate Infirmary - - - - - -	1
Workhouse for Children - - - - -	1
Relief—	
Committees for Relief - - - -	12
Ditto (Districts) - - - -	1
Ditto Rescinding - - - -	1
Removability and Settlement of Paupers. Decision - -	2
Schools—	
Authorising reception of Pauper Children (Certificates granted) -	8
Ditto Ditto (Certificates cancelled)	4
Removal of Roman Catholic Children - - -	1
Securities: Register of. (Included in "General Orders.")	
Unions—	
Separation of Parishes from, or addition of Parishes to - -	6
Dissolved Unions; extending time for Guardians to act -	1
Ditto custody of Documents - - -	1
Vaccination—	
Appointment of Teacher - - - -	1
Valuation—	
Loan - - - - - - -	1
Vestries Act—	
Application of, wholly or in part, to Parishes: Providing Vestry Rooms, and authorising appointment of Vestry Clerk, &c. -	6
Witnesses—	
Payment of Expenses incurred in attending Inquiries held by Local Government Inspectors - - - -	19
Workhouses, Separate Workhouse or District Schools, Infirmaries, Asylums, Dispensaries, Relief Offices, &c.—	
Expenditure in the purchase, erection, or hiring of Buildings, or in additions thereto, and in the purchase, hiring or exchange of Lands for Sites or other purposes - - - -	104
Signing consent otherwise than at Meetings of Guardians -	19
Total - - - -	1,226

Subjects of Orders.	Number issued.
LOCAL GOVERNMENT AND PUBLIC HEALTH.	
Accounts—	
Prescribing (Joint Hospital Boards)	2
Ditto (Port Sanitary Authorities)	1
Adjustment under section 304 of The Public Health Act, 1875	10
Alkali, &c. Works Regulation Act, 1881—	
Prescribing Form of Certificate, &c.	1
Appeals other than Audit	4
Audit—	
Decisions on Appeals against Allowances, Disallowances, and Surcharges	25
Costs of Inquiries—	
(406 cases. Schedules in Orders)	20
Debts—	
Extending time for payment	25
Elections and Nominations—	
Altering number of Members of Local Board. (*See also* "Divisions into Wards")	2
Division into Wards (Urban Authorities)	1
Fixing and extending time for election of Local Boards	17
Nomination of Members of Rural Sanitary Authorities	6
Financial Statement "The District Auditors Act, 1879"	1
Highways—	
Winding up Turnpike Trusts	3
Distribution of Balance of Moneys	1
Hospital District (Joint Board)—	
Fixing time and place of First Meeting	2
Inspectors of Nuisances. (*See* Officers.)	
Lands (Surplus)—	
Exchange of (section 175 of The Public Health Act, 1875)	3
Letting Property (section 177 of The Public Health Act, 1875)	2
Loans—	
Return as to Sinking Fund, Instalments, or Appropriation	2
Repayment to Public Works Loan Commissioners of unapplied balances (section 4 of The Public Health Act, 1875)	1
Ditto of part applied to purposes other than those for which obtained	1
Local Act—	
Fixing number and boundaries of Wards	1
Local Boards—	
Dispensing with Prohibition to vote at Meetings of	2
Local Government Districts—	
Settlement of Boundaries	1
Constitution of, otherwise than by Provisional Orders	5
Medical Officers of Health. (*See* Officers.)	
Meetings (first) fixing time and place of. (*See* "Hospital Districts" and "Port Sanitary Authorities.")	
Officers—	
Compensation for loss of Office	3
Joint Appointment of Medical Officers of Health	6
Ditto of Inspector of Nuisances	1
Carried forward	149

Subjects of Orders.	Number issued.
Local Government and Public Health—*continued.*	
Brought forward	149
Port Sanitary Authorities—	
Assigning powers (Port of London)	1
Constitution of, otherwise than by Provisional Orders	5
Renewal of	31
Ditto (Joint Board)	1
Accounts (ditto) Permanent	1
Apportionment of Expenses. (Included under "Renewal.")	
Fixing time and place of first meeting (Joint Board)	2
Regulations. Medical Officers of Health	1
Ditto Inspectors of Nuisances	1
Provisional Orders—	
(For particulars, see Tables at pages 397 to 401.)	
Under The Public Health Act, 1875	70
Under The Gas and Waterworks Facilities Act, 1870, and The Public Health Act, 1875	1
Under section 16 of The Highways and Locomotives (Amendment) Act, 1878	1
Under the Artizans and Labourers Dwellings Improvement Act, 1875	1
Rivers Pollution Prevention Act, 1876—	
Consent to Proceedings under Part III.	3
Suspension of section 3	6
Sewers—	
Sanction to works without District	2
Limiting time for providing under section 299 of the Public Health Act, 1875	2
Special Drainage Districts—	
Constitution of	5
Dissolution of	3
Special Expenses—	
Determining	41
(Many of the Orders included under the head of "Urban Powers conferred on Rural Sanitary Authorities," also contain provision for special expenses.)	
Steam Whistles—	
Revoking sanction	1
Urban Powers conferred on Rural Authorities. (For particulars, *see* Table at page 436.)	48
Ditto extending time for Publication of Orders	4
Divesting Rural Authorities of Powers conferred	1
Water Supply—	
Fixing general scale of charges	16
Determining cost in particular cases	2
Limiting time for providing	1
Total	400
TOTAL (Poor Law)	1,226
GRAND TOTAL	1,626

No. 126.

GENERAL ORDERS ISSUED by the LOCAL GOVERNMENT BOARD during the Year 1882.

Date of Order.	To whom addressed.	Subject.
1882. Jan. 21	The Guardians of the Nottingham Union.	Removing suspension, as regards the Nottingham Union, of Articles 32 and 33 of the General Order of the 14th of February 1877 in which provision is made for the remuneration to be paid to the Returning Officer for conducting Elections of Guardians.
July 13	The Guardians of the Woolwich Union.	Suspending, as regards the Woolwich Union, so much of Article 13 (No. 1) of the General Order of the 22nd April 1871, as requires the out-door dispenser to devote his whole time to the service of the Guardians.
Nov. 10	The Guardians of the Prescot Union.	Renewing the operation (which was suspended as regards the Prescot Union), of Articles 177, 181, 182, and 183 of the General Consolidated Order of the 24th of July 1847, providing for the payment of special fees to Medical Officers in certain cases.
Nov. 28	The Guardians of the Derby Union.	Suspending, as regards the Derby Union, the operation of Articles 177, 179, 180, 181, 182, and 183 of the General Consolidated Order, and Article 178 of that Order as amended by the General Order, dated the 10th of June 1875, relative to the payment of special fees to the District Medical Officers in certain cases.
Dec. 7	The Guardians of the several Unions in England and Wales. The Boards of Management of the several District Schools and Asylum Districts.	Prescribing regulations with respect to the register of securities under 45 & 46 Vict. c. 58. s. 14.
Dec. 18	The Guardians of the several Unions in England and Wales.	Rescinding the General Order dated the 22nd November 1871 and prescribing regulations with respect to casual paupers.

Date of Order.	To whom addressed.	Subject.	Date of Order.
1882. Dec. 21	The Guardians of the Parish of Barrow-in-Furness.	Rescinding regulations as to casual paupers prescribed by the Special Consolidated Orders bearing the dates set opposite to the name of the Parish and Unions respectively.	15 April 1876
	The Guardians of the following Unions:		
	Canterbury		8 April 1881
	Coventry		13 April 1874
	Exeter		30 May 1878
	Middlesbrough		16 July 1875
	Pontardawe		12 April 1875

Appendix N.

Parliamentary Returns.

Page.

No. 127. List of Reports, Returns, and other Documents prepared by the Board and presented to Parliament during the Session 1882 - - - - - - 460

No. 127.

LIST OF REPORTS, RETURNS, and other DOCUMENTS prepared by the LOCAL GOVERNMENT BOARD and presented to Parliament during the Session 1882.

Subject of Document.	Parliamentary Number.	Number of printed pages.
POOR LAW:		
Monthly Comparative Statement of Paupers, for 1881 and 1882	100. (A.) to 100. (A.–XI.)	84, folio.
Paupers, 1st January 1882	100. (B.)	49, folio.
„ 1st July 1882	100. (B.–I.)	49, folio.
In-maintenance and Out-door Relief:		
Half year ended Lady-day 1882	100. (C.)	33, folio.
Half year ended Michaelmas 1882	100. (C.–I.)	33, folio.
Annual Poor Rate Return, 1881–1882	100. (D.)	15, folio.
Paupers.—Return of the Number of Persons Relieved as Paupers (exclusive of Vagrants) during the half-year ended with Lady-day 1881, in each Union-County of *England*, together with the Ratio of Paupers per 1,000 of the Population (Census 1881)	146.	26, folio.
Poor Rate Valuation.—Return of the Valuation to the Poor Rates of each Parish in *England* during the parochial year 1881–82	172.	234, folio.
Workhouse Chaplains.—Return (in continuation of Return ordered the 16th June 1879) (No. 20, Session 1880,) for the year 1880, substituting in the Return for *England* the following Classification of Inmates: 1. Church of England; 2. Roman Catholic; 3. All other Denominations.	289.	157, folio.
Paupers (England).—Return of the Number of Paupers in Receipt of Relief on the 1st day of January 1881, and Sums expended for In-maintenance and Out-door Relief; also the Total Amount of Relief to the Poor during the year ended the 25th day of March 1881, in *England*; Totals to be shown for each Union, County, and for the Kingdom (in continuation of Parliamentary Paper, No. 396, of Session 1881)	339.	24, folio.
Workhouses, Metropolis (Attendance at Divine Worship).—Return showing, in the case of each Metropolitan Workhouse, what Restrictions, if any, in respect of Age, as Punishment, or otherwise, are imposed on the Attendance at Divine Worship on Sunday by Male and Female Paupers respectively, belonging to Denominations whose Service is not conducted within the Workhouse	354.	5, folio.

List of Reports, Returns, and other Documents prepared by the Local Government Board and presented to Parliament during the Session 1882—*continued*.

Subject of Document.	Parliamentary Number.	Number of printed pages.
Poor Law—*continued*.		
Paupers (Removal).—Return of the Number of Orders of Removal of Paupers, and of the Number of Persons removed under such Orders from the several Unions and Parishes under separate Boards of Guardians in *England* during the year ended at Lady-day 1882; also of the Number of Paupers removed by Consent under 28 & 29 Vict. c. 79. s. 6; and of the Expenses incurred in such Removals; also of the Number of Paupers Removed as aforesaid to each Union or Parish, and to *Scotland*, *Ireland*, the *Channel Islands*, and the *Isle of Man*; and, in the case of the Metropolis, the Number of Persons Removed from one Metropolitan Union or Parish to another - - -	366.	24, folio.
Public Health:		
Returns of the Accounts of the Metropolitan Water Companies to the 30th day of September 1881, in the Form and in continuation of the Return, No. 193, of Session 2, 1880: Of the Estimated Population of the Districts supplied by each of the Metropolitan Water Companies: Of the Approximate Quantity of Water supplied Daily by each for Domestic Purposes, and also for other purposes: Of the Revenue, so far as it can be ascertained, derived from Water supplied for Domestic and for other purposes: Of the Quantity of Water supplied by each per Person for Domestic Use: Of the Gross Income received per 1,000 gallons: And of the Charges authorised to be made by each Company	129.	17, folio.
Infectious Diseases Notification.—Copy of the several Communications received by the Local Government Board and the Home Office from the Local Authorities of the several Towns in *England* and *Scotland*, in which Local Acts are in force containing Provisions which require the Notification of Infectious Diseases, as to the operation of those Provisions - - -	164.	49, folio.
Alkali, &c. Works Regulation Act, 1881.—Return containing List of all Alkali and other Works in *England*, *Scotland*, and *Ireland*, Registered by the Local Government Board, under the Alkali, &c. Works Regulation Act, 1881, in the year 1882 - - - - -	348.	52, folio.
Metropolis Water.—Statement of Accounts of the Metropolitan Water Companies for the year 1881 - - - - - -	349.	41, folio.
Vaccination.—Copy of Report to the President of the Local Government Board by the Inspectors appointed to Inquire into certain Deaths and Injuries alleged to have been caused by Vaccination at Norwich - - - -	385 & 395.	71, folio.
Copy of Memorandum by the Medical Officer of the Local Government Board on the probable Origin of Erysipelas at the Norwich Public Vaccination Station in June 1882 - -		

LIST of Reports, Returns, and other Documents prepared by the Local Government Board and presented to Parliament during the Session 1882—*continued.*

Subject of Document.	Parliamentary Number.	Number of printed pages.
PUBLIC HEALTH—*continued.*		
Water Supply.—Return showing, with respect to the Water Undertakings of the Corporations of the Boroughs of *Birmingham*, *Bradford*, *Leeds*, *Liverpool*, and *Manchester* the following Particulars: 1. The Area Supplied; 2. Its Rateable Value; 3. The Population of the Area; 4. The Average Daily Supply, in Gallons; 5. The Quantity Supplied for other than Domestic Purposes; 6. The Quantity Supplied per Head for Domestic Use; 7. The Estimated Daily Waste; 8. The entire Capital Cost of the Undertaking; 9. The Loan Debt remaining Charged in respect thereof; 10. The Mode and Period of Repayment of the Loan Debt; 11. The Rate of Charge authorised to be made for Supply; 12. The Income derived from the Undertaking during the last year, showing (*a.*) the Amount of Water Rates and Rents, and (*b.*) the Amount received from other Sources; 13. The Amount of the Ordinary Expenditure during the last Year: (*a.*) The Maintenance of the Works; (*b.*) For Management; (*c.*) For Interest and Repayment of Principal.	397.	7, folio.
Tenth Annual Report of the Local Government Board (Supplement containing Report and Papers submitted by the Board's Medical Officer on the Use and Influence of Hospitals for Infectious Diseases) - - - - -	C.-3290.	363, 8vo.
LOCAL TAXATION:		
Local Authorities Accounts (England).—Return showing Receipts and Expenditure abstracted from the Accounts of the Local Authorities (England), for the year 1879-80 - -	55.	5, folio.
County Rates (England).—Abstract of the County Treasurers Accounts, for year ended Lady-day 1881 - - - - - -	101	16, folio.
Local Taxation (England and Metropolis).—Return of the Sums raised in England and Wales as Local Taxes by each Authority during each of the Seven Local Taxation Years ended with 1880; the Amount of Loans outstanding against each Authority at the Termination of each of the Seven Years; also, the Total Population and the Valuation of the Poor's Rate for each year - - - - - - - Similar Particulars for the Metropolis only -	112,	6, folio.

LIST of Reports, Returns, and other Documents prepared by the Local Government Board and presented to Parliament during the Session 1882—*continued.*

Subject of Document.	Parliamentary Number.	Number of printed pages.
LOCAL TAXATION—*continued.*		
Local Taxation Returns (Annual), 1880–81 -	343.	377, folio.
Disturnpiked and Main Roads.—Copy of a Minute of the President of the Local Government Board as to the proposed Appropriation of the Grant of 250,000*l.* in Aid of the Cost of Maintenance of Disturnpiked and Main Roads in *England, Wales,* and *Scotland* - -	365.	1, folio.
Main Roads.—Return relative to Repayments made in respect of the Maintenance of Main Roads, 1880–81 - - - - - - -	370.	35, folio.
Turnpike Trusts.—Receipts and Expenditure for the year ended Lady-day 1881 - -	C.–3214.	45, folio.
Highways.—Receipts and Expenditure for the year ended Lady-day 1881 - - -	C.–3274.	63, folio.
GENERAL:		
Annual Report of the Local Government Board (Eleventh) - - - - - -	C.–3337.	500, 8vo.

LONDON : Printed by EYRE and SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

623

TWELFTH ANNUAL REPORT

OF

THE LOCAL GOVERNMENT BOARD

1882–83.

SUPPLEMENT

CONTAINING THE

REPORT OF THE MEDICAL OFFICER

For 1882.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED BY EYRE AND SPOTTISWOODE.

To be purchased, either directly or through any Bookseller, from any of the following Agents, viz.,
Messrs. HANSARD and SON, 13, Great Queen Street, W.C., and 32, Abingdon Street, Westminster;
Messrs. EYRE and SPOTTISWOODE, East Harding Street, Fleet Street, and Sale Office, House of Lords;
Messrs. ADAM and CHARLES BLACK, of Edinburgh;
Messrs. ALEXANDER THOM & Co., or Messrs. HODGES, FIGGIS, & Co., of Dublin.

1883.

[C.—3778—I.]

PUBLIC HEALTH.

ANNUAL REPORT

OF THE

MEDICAL OFFICER

OF

THE LOCAL GOVERNMENT BOARD

FOR THE YEAR

1882.

Re 5764. Wt. 21910. a 2

CONTENTS.

Page

MEDICAL OFFICER'S REPORT:

I.—Vaccination - - - - - - iii

II.—Security in Vaccination. Instructions to Public Vaccinators. Foreign Vaccination Laws - - iii

III.—National Vaccine Establishment - - - v

IV.—Local Inquiries by Medical Inspectors:

(*a.*) Diphtheria at Pirbright, and its relation to School Attendance - - - - - vi

(*b.*) Scarlatina in West London related to Milk Service - vii

(*c.*) Enteric fever at Bangor related to pollution of Water Supply - - - - - vii

(*d.*) Enteric Fever at Norwood, near Uxbridge, and at Sherborne, Dorsetshire - - - - viii

(*e.*) Anthrax among Hide and Skin Sorters in London - viii

(*f.*) Other local inquiries - - - - viii

V.—Other Administrative Proceedings:

General functions of Department - - - ix

Sanitary aspects of Emigration and Immigration - ix

Nature and Causes of Epidemic Diarrhœa - - x

Hospitals for Infectious Disease - - - x

School closure as a means of preventing spread of Disease xi

VI.—Auxiliary Scientific Investigations:

Relation of Pathogenic to Septic Bacteria: Anthrax Cultivations - - - - - - xi

Infection and Disinfection - - - - xiii

Chemical Constitution of the Brain - - - xiii

VII.—Conclusion - - - - - - xiv

Appendix A.:

No. 1.—Digest of the Vaccination Officers' Returns for 1880 1

No. 2.—List of the Unions inspected in 1882 as to Vaccination, and an account of the Awards made to Public Vaccinators - - - - 18

No. 3.—Statistics of the National Vaccine Establishment and the Educational Vaccination Stations - - 23

No. 4.—Abstract of the Medical Inspection made in 1882 with regard generally to the incidence of Disease in particular places, and to consequent questions concerning the Local Sanitary Administration - 26

No. 5.—Report by Mr. S. F. Murphy on the operations of the Animal Vaccine Establishment - - 34

No. 6.—Notes prepared from Official Documents as to the Laws regulating Vaccination in European Countries (1882) - - - - - - 40

Page

No. 7.—Report by a Committee appointed to investigate Dr. Cory's Experiments in vaccinating himself from Syphilitic Children - - - - 46

No. 8.—Report by Mr. W. H. Power on Diphtheria in Pirbright, and on the Influence of the School there in the behaviour of the Disease - - 52

No. 9.—Report by Mr. W. H. Power on an outbreak, in certain districts of London, of Scarlatina believed to have been distributed in Milk; with Postscript recording certain Experiments by Dr. Klein, F.R.S. - - - - - - 63

No. 10.—Report by Dr. F. W. Barry on an extensive outbreak of Enteric Fever at Bangor and neighbourhood - - - - - 72

No. 11.—Report by Mr. W. H. Power on a localised outbreak of Enteric Fever at Norwood, in the Uxbridge Rural Sanitary District - - - - 84

No. 12.—Report by Dr. F. H. Blaxall on a limited outbreak of Enteric Fever at Sherborne, Dorsetshire - 92

No. 13.—Report by Mr. John Spear on the occurrence of Anthrax amongst persons engaged in the London Hide and Skin Trades - - - - 98

No. 14.—Report by Dr. F. H. Blaxall on the sanitary aspects of Emigration and Immigration, from and into the United Kingdom; and of the intercommunication that takes place between the various Home Ports - - - - - - 132

No. 15.—Memoranda, prepared with the assistance of Dr. H. F. Parsons, on the circumstances under which the closing of Public Elementary Schools, or the exclusion therefrom of particular children may be required, in order to prevent the spread of disease - - - - - - 195

Appendix B.:

No. 1.—Further Report by Dr. E. Klein on the relation of Pathogenic to Septic Bacteria, as illustrated by observations on Bacillus Anthracis - - 201

No. 2.—Memorandum by Dr. J. Burdon Sanderson on lines of Research concerning Infection and Disinfection 213

No. 3.—Report by Dr. J. L. W. Thudichum on Further Researches on the Chemical Constitution of the Brain - - - - - - 221

REPORT.

TO THE RIGHT HONOURABLE SIR CHARLES WENTWORTH DILKE, BART., M.P., PRESIDENT OF THE LOCAL GOVERNMENT BOARD.

SIR,

Medical Officer's Report.

IN supplement to the Board's Twelfth Annual Report I have the honour to submit to you an account of the more special proceedings taken in your Medical Department during the year 1882.

I.—VACCINATION.

Vaccination returns.

(*a.*) Analysis made in the usual way of the returns of local vaccination officers, with regard to children whose births were registered in the year 1880, shows, except as regards 4·69 per cent. of the births, the vaccination of all the children born in England and Wales during the year to be accounted for in the local registers. Owing, in chief measure to the more moveable character of the population of the London parishes, the children born in the metropolis habitually show a larger proportion of omissions than children born elsewhere in the kingdom, and during the year 1880 this proportion amounted to 7 per cent. of the births, while, among those born elsewhere, it reached to 4½ per cent. only. For extra-metropolitan England this per-centage is the same as that for the preceding year; for the metropolis it is smaller than in 1879.

Inspection.

(*b.*) During the year 1882 public vaccination, with which the Board is more particularly concerned, was as usual supervised by the inspectors of the medical department, and 284 unions, comprising 1,350 vaccination districts, were visited in the year.

Awards of money from the Parliamentary grant were made on the recommendation of the inspectors to contractors for public vaccination in respect of 751 of these districts. In these the public vaccinators had, according to inspectors' reports, discharged in a satisfactory manner the duties imposed on them by their contracts with the guardians. In other districts there had been more or less of departure from contract duty; or, for some other cause, an award could not be made.

II.—SECURITY IN VACCINATION. INSTRUCTIONS TO PUBLIC VACCINATORS. FOREIGN VACCINATION.

Security in vaccination.

In my last report, when demonstrating a saving of 12,000 lives of London children that would, but for vaccination, have been sacrificed to small-pox in 1881, I had occasion to mention 12 deaths registered as having been caused by cow-pox and diseases

MEDICAL OFFICER'S REPORT.

occurring after vaccination in London during the same period; and I stated that inquiry into the facts of the several deaths had shown that the cause of death was, with hardly an exception, erysipelas. The Registrar General's Report for 1881 has since been issued, and it shows the mortality registered as from cow-pox and conditions regarded as effects of vaccination, was, for England and Wales with a population nearly seven times as large as London, not quite five times the amount ascribed to such causes in London in 1881.

During the year 1882 inquiries were held by inspectors of the department into cases of fatal erysipelas, occurring after vaccination, at Norwich and Derby. The results of the Norwich inquiry have already been submitted to Parliament. In the other case, a proved slovenliness on the part of the vaccinator led to the conclusion that septic infection had probably been conveyed by some dirty appliance used in the operation. The operator was consequently required to resign his appointment as public vaccinator. Inquiry was also made as to an alleged death by vaccinal syphilis at Wolverhampton; here the syphilis was certainly not conveyed by the vaccination, but was congenital in the infant.

Instructions to public vaccinators.

The Board's Instructions for Public Vaccinators are designed to attain the greatest efficiency of vaccination while avoiding all risks incidental to the operation. These instructions are, by the terms of their contracts, binding on Public Vaccinators, and as the reports of the medical inspectors show, they have usually been obeyed by the contractors. Serious disobedience to them was but rarely met with. But, as there are still some vaccinators, even some few public vaccinators, who do not vaccinate in the most efficient manner, so there are also some who neglect to take the full measure of precaution which, as practitioners performing an important operation upon patients, they ought to take.

The occurrences at the Norwich Vaccination Station in the summer of 1882, have shown the necessity for introducing another formal instruction into the Board's code. It is designed to prevent the accidental inoculation of any trace of septic matter, and thus to reduce the risk of erysipelas or similar disease. It enjoins the vaccinator never to use a point, glass, or tube *a second time*, either for the conveyance or the storage of lymph.

For the prevention of accidental inoculation of syphilis during vaccination, experience shows the precautions at present formulated in the Board's Instructions to be sufficient. Experimentally, indeed, Dr. Cory has recently succeeded in communicating to himself syphilis with vaccine lymph unmixed with blood, but he did so only by purposely setting aside two precautions of the Instructions, and setting them aside in such manner as no medical practitioner is likely by any accident or carelessness to imitate. His experiments are the subject of an appended Report. (Appendix A., No. 7.)

Vaccination in foreign countries.

At the instance of the Board inquiry has been made by the Foreign Office as to the laws regulating the practice of vaccina-

tion in the several countries of Europe. In the appended paper (A., No. 6) is given the substance of the replies, together with a variety of information respecting the actual observance of vaccination and the prevalence of small-pox. A general increase of stringency in requiring vaccination is observable in the laws of various countries since the severe epidemic of small-pox in 1870–71. Throughout the German Empire the operation has been obligatory since 1875. On the other hand a proposal for uniform compulsory law throughout the Swiss cantons was rejected by the popular vote in 1881, the cantons objecting, it would seem, to transfer to the Federal Government what they regarded as being their own legislative functions.

III.—National Vaccine Establishment.

Supply of humanized lymph:

(*a.*) *Humanized Lymph.*—The customary supplies of this lymph were received in the National Vaccine Establishment during 1882. They were derived from certain large public stations at which during the year an aggregate of 24,391 primary vaccinations were performed. Charges of lymph, selected by the experienced vaccinators of these stations were received to the number of 5,089 points, 40 glasses and 13,861 tubes. A further number of 8,056 tubes was received from certain approved public vaccinators in supplement to the usual sources of supply. These charges were all examined within the department and were distributed in response to 9,142 applications, principally for the purpose of commencing local series of vaccinations. Representations as to irregularity or abnormal symptoms in the course of the resulting vaccinations were received from six of the applicants.

of animal lymph.

(*b.*) *Animal Lymph.*—With my account of the proceedings of the Medical Department during 1881, I presented a Report by Dr. Cory on the earlier proceedings of the Animal Vaccine Institution established in that year by the Board. The business of that institution has progressed satisfactorily during 1882, in spite of certain difficulties introduced into its working by the prevalence of foot-and-mouth disease in the country. In an appended Report (A., No. 3) by Mr. Shirley Murphy, who has recently been acting for Dr. Cory, the history of the operations at the Lamb's Conduit Street Station is continued and brought down to the end of March 1883. The chief practical interest in this report consists in the indications that are beginning to appear that there is much less difference than has heretofore been supposed between calf lymph and humanized lymph. Certainly the care and judgment wanted for proper selection of lymph in the case of the one are wanted in the case of the other; as in the child, so in the calf, there are peculiarities of individuals to be apprehended; imperfect and irregular vesicles to be avoided; development of special characters in the lymph during successive cultivations to be watched for. And, under the actual conditions of lymph selection and of operation observed at Lamb's Conduit Street and at Surrey

Chapel respectively, there has recently seemed little to choose between the one and the other kind of lymph, either in respect of insertion success or in respect of local and constitutional effect produced; further, the influence of storing upon the activity of the lymph, at one time believed to be more rapid and more pronounced in the case of the calf product, is now appearing to be not very different in the case of humanized lymph and calf lymph. But more extended experience will have to be obtained before an identity of the two kinds of lymph in these several respects can be affirmed or denied.

Between the opening of the Lamb's Conduit Street Station in April 1882, and the end ot the year 3,655 points, and 471 tubes charged with animal lymph were sent from that station to the National Vaccine Establishment. Applications for this particular kind of lymph to the number of 589, were received in the establishment; and, mostly in reply to these applications, 2,872 charged points, and 270 tubes were sent out. Some animal lymph was also supplied for the use of the army and navy; but for the most part these services were supplied with humanized lymph. Very little information as to the results of vaccination with animal lymph, or as to its specialities, has been afforded by those to whom it has been sent.

IV.—Local Inquiries by Medical Inspectors.

Local medical inquiries.

Inquiries as to local prevalences of disease were undertaken in 31 instances and extended to the districts of 46 sanitary authorities. They were most usually called for by local request or complaint made on the occurrence of some epidemic disease. They had concern most commonly with diphtheria or enteric fever; in other cases with scarlatina, typhus, diarrhœa, and small-pox.

The Board have lately, at the instance of some officers of health and others interested in sanitary knowledge, given sanction to a new practice in respect of this class of reports. Such of them as are judged to contain experiences of more than local interest are now placed on sale, as Stationery Office publications.*

Diphtheria at Pirbright.

(*a.*) A very remarkable experience of diphtheria is recorded by Mr. Power (Appendix A., No. 8) from the parish of Pirbright, near Guildford. On four successive occasions, while the village school was open, well-marked diphtheria appeared among the scholars, who carried the disease home to their respective families; and this although the school premises were free from recognizable sanitary defect, and although the school was not, after its first closure, re-opened until the disease had seemed extinct in the parish, and careful measures of disinfection had been used. There did indeed appear indications that the actual bringing together of children was responsible for a serious specific quality attaching to throat

* These publications are sold by Knight and Co., 90, Fleet Street; Shaw and Sons, Fetter Lane; Hadden, Best, and Co., 227, Strand; P. S. King and Son, King Street, Westminster.

ailments which otherwise would have been trivial. Mr. Power's report is worthy of the most attentive study, particularly by those who have opportunity of watching the behaviour of diphtheria in rural communities.

Spread of scarlatina by milk.

(*b.*) Of late years, since medical practitioners have given attention to the means of distribution of infectious diseases, an increasing number of local outbreaks of enteric fever, of scarlet fever and of diphtheria, have been recognised as spread through local communities by means of milk. In such outbreaks, contamination of the milk by the material of specific disease derived from some antecedent case in the human subject has been of necessity the first explanation that has offered itself for acceptance; and in many such outbreaks, this explanation has appeared valid and sufficient. But, in outbreaks of scarlatina more especially, such a hypothesis of the manner in which the milk may have obtained its specific quality has not always accorded with the observed facts; and not unfrequently it has appeared, during recent epidemics, that for all we can affirm to the contrary the endowment of the milk with harmful attributes may be an affair of the very system of the animal furnishing the milk. A notable illustration of this class of outbreak is given in an appended paper (A., No. 9). Here is an account of scarlatina in several London districts appearing at the same moment among many consumers of a particular milk and not among their neighbours. It can be said that the milk was unquestionably the vehicle of the epidemic: yet the history of that milk could be traced with a good deal of assurance from its leaving the cow at a Surrey farm to its delivery in houses of central London, and no method by which it could have received the infection of human scarlatina was to be suggested as in any way probable. Thus, a hypothesis that the milk actually possessed, at the moment of entering the pail, the power which it assuredly had of producing scarlatina in the human subject, forced itself upon consideration; and, although indeed the thing was beyond customary experience, such a hypothesis was seen to accord with the observed facts of the outbreak. In this position of the question, research into the liability of the cow to suffer from disease of a nature allied to scarlatina has been begun for the Department by Dr. Klein. He has found that a cow, having recently calved, when inoculated experimentally with human scarlatina, is affected by an ailment which is transmissible, after the manner of an acute specific disease, to dogs; that this ailment in the cow is not accompanied by any marked fever, does not take her off her food, and does not alter the quantity or visible characters of her milk. Its symptoms are not such as would be recognised as forbidding the use of the cow for dairy purposes. Further inquiry is wanted to show whether the animal is liable, without such artificial inoculation, to suffer from similar ailment proper to her own system.

Enteric fever at Bangor.

(*c.*) At Bangor, in June 1882, enteric fever, which had previously been of occasional occurrence only in the city, suddenly assumed

MEDICAL OFFICER'S REPORT.

serious proportions, and was the subject of investigation for the department by Dr. Barry. He obtained very strong circumstantial evidence that the public water supply had on a particular occasion become polluted by river water flowing over the filter beds and carrying with it the accumulated dirt from the filtering surface and also excrements that had been discharged into the river; there was reason for believing that among the latter were the discharges of certain enteric fever cases. Upon the recognition of this mechanism of the fever distribution, efficient steps for securing the water-supply against further pollution were adopted, and the epidemic rapidly declined, but not until it had caused 548 cases of sickness and 42 of death in Bangor and its immediate neighbourhood. Dr. Barry's report forms one of the appended papers (A., No. 10).

near Uxbridge, and at Sherborne.

(*d.*) Two smaller outbreaks of the same disease that were the subject of inquiry by the department during the year exhibited peculiarities of more than passing interest (Appendix A., Nos. 11 and 12). The one occurred at Norwood, near Uxbridge, the other at Sherborne, in Dorsetshire. They both illustrate instructively, but in different ways, how greatly the prevalence of this fever is an affair of local sanitary administration.

Malignant pustule in London hide-trades.

(*e.*) In the present volume I have included a report by Mr. Spear upon an inquiry, begun during the first quarter of 1883, as to the occurrence of malignant pustule among persons engaged in the London hide and skin trades. The disease is the external manifestation of that anthrax which has already been the subject of report to the Board as it has appeared among horsehair workers at Glasgow and among woolsorters at Bradford and other districts of Yorkshire (Medical Officer's Reports, 1878, p. 321, and 1880 p. 66). It is now recognized as of occasional occurrence in the metropolis, more particularly taking patients to Guy's Hospital from the tanyards of Southwark; but, as in other towns, being practically restricted to those whose occupation brings them into contact with foreign hides or like products. Particular consignments of Chinese ox hides appeared to be specially concerned with the cases now recorded. I have already, in my report for 1880, considered the nature of the measures calculated to lessen the risk of this disease among woolsorters: and some further suggestions applicable to the circumstances of the trade in hides are made by Mr. Spear in the present report (Appendix A., No. 13).

Other local inspections.

(*f.*) In addition to inquiries about prevalences of disease, inspectors of the Medical Department have made 23 other visits to the districts of sanitary authorities, in cases where the Board desired to have skilled observation respecting some matter concerning the health of the district, or to convey to a sanitary authority their views respecting some medical question involved in local health administration. In 15 of these instances the visit had reference to proposals for the provision of isolation hospitals.

V.—Other Administrative Proceedings.

Administrative duties of Medical Department.

I do not propose on the present occasion to refer otherwise than casually to the functions with which your Medical Department is charged of advising on questions concerning health and disease that arise out of the Board's daily relations with sanitary authorities and others. During 1882 the functions involved some 5,000 recorded references to the Medical Officer; with the examination of many hundred of reports—annual and special—made by local health officers, consultations on plans for hospitals, on proposals for byelaws, for sanitary works, for appointment of officers, and a variety of other matters. I confine my observations under this head to some few important proceedings in which the Department was more prominently concerned.

Dr. Blaxall's emigration inquiry.

During the year, the Board directed inquiry into the sanitary aspects of British immigration and emigration practice. The more immediate occasion of this inquiry was found in representations from the United States that small-pox was believed to have been imported into that country by immigrants from Europe.

This inquiry, entrusted to Dr. Blaxall, took into account the movements of British and Irish population to various colonies as well as to foreign countries, and also considered the practice of emigration from the Continent of Europe to the United Kingdom and across Great Britain on the way to North America. It examined the conditions of travel and lodgment of immigrants and intending emigrants and also the sanitary arrangements on board of emigrant ships: and Dr. Blaxall has brought back a mass of useful information respecting the precautions actually taken at ports of disembarkation, in lodging houses, at ports of departure and on shipboard; for maintaining health, for detecting infectious disease, and for guarding against the spread of infection. Dr. Blaxall's Report (Appendix A., No. 14) shows a great amount of intelligent forethought bestowed upon the business of immigration and emigration in its commercial aspect, and a great and always increasing amount of solicitude given, by those who undertake the responsibilities of directing emigration, to the health of emigrants as well as to the more obvious conditions of their comfort. It has appeared, as a result, that the quantity of preventable sickness spreading in emigrant ships leaving the United Kingdom or transmitted through their agency cannot be reckoned as large, when the exceptional conditions of the people are taken into account. He does not give so favourable a picture of the arrangements made for detecting infectious disease among persons arriving on our shores from continental countries; and in this light his report demands the careful consideration of the sanitary authorities of our own ports.

Dr. Blaxall points especially to the lack of organised relation between shipping companies and sanitary authorities, and to the need for one and another measure of co-operation among these bodies, and he is particularly anxious for regular medical inspec-

tion of foreigners landing in English ports. The various suggestions which Dr. Blaxall has made for improvement in our sanitary practice in ports and on shipboard have the sanction of his old naval experience, and he does not foresee any real difficulty in the attainment of them in practice. Referring for details to the text of the report, I need only observe, further, that Dr. Blaxall's representations have already been the means of introducing useful securities to health in one or more of our English ports.

Dr. Ballard's diarrhœa inquiry.

Dr. Ballard was engaged during a certain portion of the year in a continuation of his investigation of infantile diarrhœa in England, and the conditions of its prevalence and fatality, with the object of gaining some insight into the causes of the disease and the means of its prevention.

I need put forward no excuse about the length of time over which his inquiry is extending. The importance and difficulty of the work may be judged of, when it is recalled that this infantile diarrhœa, manifesting its whole intensity during a very few weeks of the year, is fatal on the average to 15 out of every 1,000 children born in England and Wales, in some years to double as many as in other years; that there are some towns where its average mortality closely approaches 50 out of every 1,000 children born, and where its mortality in some years is three or four times what it is in other years; and lastly, that before Dr. Ballard's inquiry hardly an effort had been made to understand the disease, its obvious association with hot weather having been almost all that was recognised in regard of its cause.

Infectious hospital inquiry.

During the year 1882, in addition to my usual report on the current work of the Department, I had the honour to present to your predecessor a paper on the Use and Influence of Hospitals for Infectious Diseases. In this paper I recorded the results of inquiries made by Dr. Thorne and Mr. Power into the conditions for the greatest usefulness of such hospitals regarded as places for the treatment of patients aud as institutions for the protection of communities against the spread of infection. I had to take account of certain drawbacks to the usefulness of hospitals that had been met with in practice, particularly in the practice of London hospitals for small-pox. It had appeared from the experience of one of the hospitals of the Metropolitan Asylums Board that small-pox had during successive years exhibited a power of extending from the hospital to the houses of the neighbourhood; and this, not by reason of faults in administration, but, as it appeared, by the dissemination through the atmosphere of small-pox material from the very hospital itself.

The Royal Commission which was appointed for the investigation of this subject as it affected the Metropolis has very critically examined the evidence collected by Mr. Power in his Fulham Hospital inquiry, and has given a virtual acceptance to Mr. Power's facts and inferences. And further extending its investigations to the experience of other metropolitan small-pox hospitals, the Commission has arrived at the more general conclusion "that

"large small-pox hospitals in populous neighbourhoods have "proved appreciable sources of infection" to their neighbourhoods.

Report of Commission.

The report of this Commission was presented to Parliament in August 1882. It contains, on the one hand, certain practical recommendations which have for their primary object to secure a more efficient management, under the auspices of the Metropolitan Asylums Board, of infectious disease occurring among the inhabitants of London; and upon this section of its recommendations your Board will be advised by Dr. Bridges. On the other hand, the report of the Commission contains much important matter of interest for your Medical Department. It considers how popular objections to infectious hospitals can best be removed, how such hospitals may be utilized for the greatest advantage of communities, what facilities can be obtained for the acquisition of hospital sites, and what securities against sudden interruption of hospital operations; and further it refers to the probability of attaining, by the adoption of various precautions and contrivances in the administration and construction of small-pox hospitals, a fuller assurance of safety to neighbouring dwellings.

Memoranda of Medical Department:

as to hospitals:

A re-issue of the memorandum of the Medical Department "On the Provision of Infectious Disease Hospitals" is now in course of preparation. Based, like the former issue, upon the experience gathered by the Department from the actual working of such hospitals in English communities, and having now a longer and a wider experience as its basis, the memorandum is designed for the assistance of local sanitary authorities throughout the kingdom. In the preparation of this memorandum regard is had to the advice of the Royal Commission on Metropolitan Hospitals.

as to schools.

Mention was made in my last report of the new Code of the Education Department of the Privy Council, issued in March 1882, and of the power conferred upon sanitary authorities, by Art. 98 of the Code, to direct precautions to be taken with the object of preventing the spread of infectious disease by means of public elementary schools. A good deal of experience has already been gained in your Medical Department as to use of one or another measure of this kind, and as to the conditions under which it is desirable in the interests of health to exclude scholars coming from infected houses, or, on the other hand, to close the schools of a district. I have placed in the Appendix (A., No. 15) some memoranda embodying this experience, in the hope that they may prove helpful equally to those authorities of a district that are charged with its education and to those whose first care is for its health.

VI.—Auxiliary Scientific Investigations.

Mutations of micro-organisms: Dr. Klein.

Dr. Klein has continued his investigations into the relations of pathogenic bacteria, with the intention of further testing the expectation held out by M. Pasteur and others of a general law,

MEDICAL OFFICER'S REPORT.

applicable to all kinds of virus, that it may be possible to produce for every infective virus, an attenuated form of it which shall be capable of inoculation into susceptible animals, availing to produce in them a modified form of the infective disease protective thenceforward against serious attack of the disease. (Appendix B., No. 1.)

"Vaccin" of anthrax.

Again experimenting with the bacilli of anthrax, Dr. Klein has extended his observations to sheep, but with results in the main negative. In some way or other his anthrax "vaccin" differs from that which has been produced by M. Pasteur. One cultivate, grown at 22° C., did indeed, when inoculated into a sheep, give rise to a slight illness, after recovery from which the sheep was not susceptible of the disease. But for the most part Dr. Klein's experience on sheep was similar to his previous experience with rodents; either he obtained no result whatever from inoculation with his artificial cultivate, or else the animal was killed by it, as it would have been by inoculation with the original anthrax. Dr. Klein places on record, however, one observation that may prove to be of large pathological interest. In his experiments of this year he used the blood of a mouse dead of anthrax for inoculation into three sheep, with the result of producing in each sheep only a slight constitutional disturbance, after which the material of virulent anthrax could be inoculated into the sheep without effect upon it. Here, apparently, through the influence of change in the species of animal intermediately used, he did procure a "vaccin" that had the desired ability, such as he had sought, with very imperfect success, to obtain by any of the methods of artificial cultivation that he employed.

Dr. Klein further reports the results of his experiments with certain artificial cultivates issued from M. Pasteur's laboratory, and sold as "vaccin charbonneux." Tubes of this material, obtained from M. Pasteur's agent, M. Boutroux, of Paris, were used for the inoculation of sheep, guinea-pigs, and mice. Of the specimens received by Dr. Klein, those sold as "premier vaccin" proved to be in most instances inert, even on the rodents; not availing to protect them against death by subsequent inoculation with anthrax material; while the animals that were affected at all by this premier vaccin were affected fatally by it. The effects of inoculation with the "deuxième vaccin" were more intense, but otherwise were similar to those observed in the use of the premier vaccin; either the animals were affected by it very little or not at all, and were left as susceptible as before to the fatal disease; or else they were killed by the anthrax which the "deuxième vaccin" itself produced. Obviously the particular specimens obtained from M. Boutroux had not the power claimed for them, of causing a modified and protective form of anthrax, and it cannot but be inferred that the substances issued from M. Pasteur's laboratory are extremely uncertain in quality. Probably the conditions for the manufacture of a true attenuated anthrax-virus are numerous, and are not all understood even by M. Pasteur himself; and this makes it more a matter for regret that the precise details of the methods

which he adopts are not yet published by M. Pasteur for the information of his fellow-workers.

Of this virulent disease, known as anthrax, which has at various times caused sad devastation among the animals that furnish food to man, and which occasionally produces serious disease in the human subject, it was formerly asserted that it had a strange ability to retain its virulence in the corpses of ts victims. Dr. Klein's researches of the past year have appeared to demonstrate some fortunate limitations to the correctness of this doctrine. Provided that the body of a guinea-pig dead of anthrax be not opened after death, the changes which take place in the bacillus of the disease within the dead body are purely degenerative, and the blood and organs of the animal soon lose their power of communicating the disease by inoculation; and this is equally the case whether the dead body be buried or not. Only in the event of there being wounds on the body or of the body having been opened after death, the anthrax bacilli are capable (as they are when contained in evacuations from the creature) of entering into new generations; and at the stage of spore-formation the bacillus becomes again able to withstand ordinary destructive influences, the spores retaining the power of infection for an indefinite time. Dr. Klein's observations on these matters are confirmatory of those announced by Koch in 1881.

Researches as to disinfectants.

Recent advances in our knowledge of the affinities and of the probable nature of the matter of infection have permitted definition to be more clearly made of the objects that we seek to attain by the use of disinfecting agents. This has been done by Dr. Sanderson in an appended memorandum (B., No. 2). He here points out that research after substances endowed with disinfective powers may be expected to aid to a better understanding of the nature of infective actions themselves; and he indicates from the standpoint of our present knowledge, the directions which may best be followed for the discovery of such agents, potent for the control alike of septic and of specific contagia outside the living body, and perhaps antagonistic to the operation of contagia within the body. Your sanction has been given to a design for commencing without delay some sustained researches, upon the lines indicated in Dr. Sanderson's memorandum, into the behaviour of some better known contagia in presence of various colytic agents.

Chemistry of brain: Dr. Thudichum.

Dr. Thudichum has now completed those profound researches into the chemical composition of the brain on which he has been so long engaged for the Board. In his appended paper (B., No. 3), he records some further studies of the phosphorized principles of the brain, and proposes new views as to the grouping of elements within those complex substances which he and other chemists have obtained by analysis of the several parts and tissues of the nervous system: substances to the number and understanding of which he has himself principally contributed. His researches have shown, he says, the brain to be the most diversified chemical laboratory of

Medical Officer's Report.

the animal body; all other organs being much more simple, and very much less specific in their chemical constitution than the organs producing and conducting nerve power. Classifying afresh the immediate principles of the brain, and their derivatives which he has discovered, he has now, in the concluding report, summarized the various principles of the brain, phosphorized and non-phosphorized, nitrogenized and non-nitrogenized, assigning to each its chemical formula, and the formula of its chief compounds; and without professing to have exhausted this most arduous subject, he exhibits a mass of research into the chemistry and chemical operations of the nervous system which will form a new point of departure for the biologist and supply a body of reference for the observer of vital processes whether in health or in disease.

VII.—Conclusion.

Mr. Radcliffe's retirement.

In concluding this report, I have to lament the serious loss that this Department has sustained by the retirement, owing to ill-health, of Mr. Netten Radcliffe from the office of Assistant Medical Officer to the Board. In one respect, this event is of concern to the whole Government. Mr. Radcliffe's singular powers of gathering information respecting foreign epidemics, and of appraising the medical significance of facts and rumours concerning them, have been repeatedly illustrated in these reports, and have led to his counsel being highly valued by the Foreign Office and Colonial Office, as well as by your Board.

During the year 1882, a number of references were made to your Board by the Privy Council, the Foreign Office, and other Departments of State, with the object of obtaining the advice or assistance of your Medical Department. In these questions the health and commerce, not only of Great Britain, but of Europe, were concerned; and, for the last time, Mr. Netten Radcliffe afforded to the Government his experienced services in respect of them.

I have the honour to be, Sir,
Your obedient Servant,

George Buchanan.

December 31st, 1883.

APPENDICES.

APPENDICES.

APPENDIX A.

App. A. No. 1.
Digest of Vaccination Officers' Returns.

No. 1.

DIGEST of the VACCINATION OFFICERS' RETURNS, with regard to CHILDREN whose BIRTHS were registered in the Year 1880.

The following is the ninth annual return under the Vaccination Act, 1871. Of 881,652 births returned to the Board by the several Vaccination Officers in England and Wales as registered during the year 1880, the number which at the time the return was made had been recorded as successfully vaccinated was 750,203 (being 85·1 per cent. of the whole), and the number returned as having died before they could be vaccinated was 87,361 (or 9·9 per cent. of the whole). Of the remaining 44,088 children, 859 (or 0·097 per cent. of the whole) had been recorded as insusceptible of vaccination; 46 (or 0·005 per cent.) as having contracted small-pox before they could be vaccinated; 5,930 (or 0·67 per cent.) as having their vaccination postponed by medical certificate; leaving 37,253 (or 4·2 per cent.) as "removed," "not to be traced," or otherwise unaccounted for. If from the 881,652 births returned by these Officers, deduction of the deaths without vaccination be first made, it appears that of the surviving 794,291 children, there were registered at the time of the return 94·4 per cent. as successfully vaccinated; 0·11 per cent. as either insusceptible of vaccination, or as having had small-pox; and 0·75 per cent. as under medical certificate of postponement; leaving 4·69 per cent. as at that time still unaccounted for as regards vaccination.

Of the 37,253 cases which this last per-centage represents, the majority were children who could not be found by the Vaccination Officers, usually because of the removal of the parents from the place of birth. The remaining cases in the last column (with the exception of a certain number in which vaccination had really been performed successfully, but which could not be registered as vaccinated on account of the legal certificate of vaccination not having been received by the Vaccination Officer) were cases which, at the time of the return were still unvaccinated in the union or district.

The results continue to be less complete in the metropolis than in the rest of the kingdom, and the proportion of cases unaccounted for in the metropolitan returns for 1880 is 7 per cent.

App. A. No. 1.

Digest of Vaccination Officers Returns.

The percentage in the rest of the kingdom, which was 4·5 in 1879, was 4·5 in 1880. Of the registered births of the nine years 1872–80, the proportion not finally accounted for in regard to vaccination in each year respectively has been as follows:—

	Metropolis.	Rest of England.
1872	8·8	4·5
1873	8·7	4·2
1874	8·8	4·1
1875	9·3	3·8
1876	6·5	4·0
1877	7·1	4·1
1878	7·1	4·3
1879	7·8	4·5
1880	7·0	4·5

In 1880, the proportion of cases unaccounted for, after deduction of the postponed cases, in the metropolis and in the rest of the kingdom, was 6·6 and 3·8 per cent. of births respectively.

Returns, 1880.

App. A. No. 1.

Digest of Vaccination Officers' Returns.

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
ENGLAND & WALES -	881,652	750,203	859	46	87,361	5,930	37,253	4·9
Ditto excluding Metropolitan Unions.	748,346	638,553	596	11	75,322	5,351	28,513	4·5
Metropolitan Unions	133,306	111,650	263	35	12,039	579	8,740	7·0
Counties.								
Bedford - - -	5,009	4,222	5	—	618	34	130	3·3
Berks - - -	7,776	6,853	6	—	682	75	160	3·0
Bucks - - -	4,872	4,253	3	—	499	35	82	2·4
Cambridge - - -	5,844	5,074	5	—	612	26	127	2·6
Chester - - -	20,304	17,646	22	4	1,907	108	617	3·6
Cornwall - - -	9,469	8,040	3	—	1,165	68	193	2·8
Cumberland - -	8,508	7,479	5	—	756	74	194	3·1
Derby - - -	13,969	11,817	14	—	1,411	68	659	5·2
Devon - - -	18,224	15,983	13	—	1,620	151	457	3·3
Dorset - - -	5,509	4,906	3	—	434	52	114	3·0
Durham - - -	33,200	27,586	10	1	3,728	299	1,576	5·6
Essex - - -	18,534	16,076	23	2	1,612	109	712	4·4
Gloucester - - -	16,478	14,334	15	—	1,457	99	573	4·1
Hereford - - -	3,420	2,924	4	—	314	36	142	5·2
Herts - - -	7,172	6,434	3	—	598	20	117	1·9
Huntingdon - -	1,558	1,380	—	—	139	18	21	2·5
Kent (extra-metropolitan)	22,586	20,012	25	—	1,869	178	502	3·0
Lancaster - - -	127,896	107,991	83	—	13,535	850	5,437	4·9
Leicester - - -	11,910	8,909	6	—	1,602	36	1,357	11·7
Lincoln - - -	14,994	12,448	7	—	1,694	171	674	5·6
Middlesex (ex.-metropol.)	11,321	9,753	24	—	976	60	508	5·0
Monmouth - -	7,901	7,026	4	—	594	54	223	3·5
Norfolk - - -	13,924	11,888	7	—	1,547	72	410	3·5
Northampton - -	9,380	7,854	13	—	1,063	45	405	4·8
Northumberland - -	15,207	13,065	23	—	1,540	150	429	3·8
Nottingham - -	15,658	12,844	23	—	1,898	91	802	5·7
Oxford - - -	5,725	4,886	6	—	561	54	218	4·8
Rutland - - -	692	614	—	—	62	4	12	2·3
Salop - - -	7,752	6,820	4	—	681	72	175	3·2
Somerset - - -	15,030	13,218	4	—	1,341	138	329	3·1
Southampton - -	17,875	15,698	22	—	1,526	124	505	3·5
Stafford - - -	32,422	27,857	22	—	3,413	112	1,018	3·5
Suffolk - - -	11,329	9,945	2	1	1,036	98	247	3·0
Surrey (extra-metropol.) -	13,904	12,083	10	1	1,178	132	500	4·5
Sussex - - -	14,940	13,059	23	2	1,233	151	472	4·2
Warwick - - -	25,455	21,900	30	—	2,575	102	848	3·7
Westmoreland - -	1,994	1,840	2	—	120	19	13	1·6
Wilts - - -	7,610	6,838	3	—	595	56	118	2·3
Worcester - - -	18,699	16,117	8	—	1,872	146	556	3·8
York, East Riding -	12,408	10,285	11	—	1,449	84	579	5·3
York, North Riding -	11,499	9,779	8	—	1,277	118	317	3·8
York, West Riding -	76,428	62,520	80	—	8,480	561	4,787	7·0
Wales.								
Anglesey - - -	1,019	879	—	—	94	10	36	4·5
Brecknock - - -	1,625	1,403	—	—	171	6	45	3·1
Cardigan - - -	2,090	1,845	—	—	178	26	41	3·2
Carmarthen - -	4,234	3,796	—	—	379	15	44	1·4
Carnarvon - - -	3,645	3,221	4	—	316	41	63	2·9
Denbigh - - -	2,705	2,394	—	—	252	17	42	2·2
Flint - - -	2,783	2,478	—	—	233	19	53	2·6
Glamorgan - - -	18,345	15,846	7	—	1,690	121	681	4·4
Merioneth - - -	2,155	1,831	1	—	239	39	45	3·9
Montgomery - -	2,202	1,858	—	—	206	45	93	6·3
Pembroke - - -	2,604	2,267	—	—	239	54	44	3·8
Radnor - - -	554	479	—	—	56	8	11	3·4

App. A. No. 1.

Digest of Vaccination Officers' Returns.

METROPOLITAN UNIONS.	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
Bethnal Green	5,209	4,352	6	5	517	10	319	6·3
Camberwell	6,681	5,614	9	—	585	17	456	7·1
Chelsea	3,234	2,768	9	—	271	—	186	5·8
Fulham	4,231	3,592	12	1	373	11	242	6·0
George, St., Hanover Sq.	3,930	3,365	16	—	360	1	188	4·8
George, St., in the East	1,871	1,566	3	—	171	2	129	7·0
Giles and George, S.S.	1,513	1,226	—	—	132	6	149	10·2
Greenwich	4,710	4,004	6	5	403	17	275	6·2
Hackney	6,421	5,374	22	7	627	24	367	6·1
Hampstead	1,108	976	3	—	94	7	28	3·2
Holborn	5,714	4,769	3	2	551	19	370	6·8
Islington	9,931	8,123	26	—	885	118	779	9·0
Kensington	4,652	4,064	17	—	408	4	159	3·5
Lambeth	9,296	7,292	28	3	845	66	1,062	12·1
Lewisham	2,105	1,862	9	—	169	10	55	3·1
London, City	1,087	960	2	—	92	—	33	3·0
Marylebone	5,133	4,183	9	1	557	33	350	7·5
Mile End Old Town	4,185	3,480	14	2	388	16	285	7·2
Olave, St.	5,422	4,772	6	1	373	26	244	5·0
Paddington	2,873	2,380	7	—	267	49	170	7·6
Pancras, St.	8,113	6,839	16	2	668	12	576	7·2
Poplar	6,251	5,440	7	1	562	6	235	3·9
Saviour, St.	7,531	6,194	4	—	727	62	544	8·0
Shoreditch	5,173	4,034	—	5	501	—	633	12·2
Stepney	2,210	1,769	3	—	224	—	214	9·7
Strand	902	736	—	—	83	10	73	9·2
Wandsworth and Clapham	7,092	6,085	20	—	629	43	315	5·0
Westminster	1,274	1,063	—	—	135	8	68	6·0
Whitechapel	2,673	2,400	—	—	212	2	59	2·3
Woolwich	2,781	2,368	6	—	230	—	177	6·4
	133,306	111,650	263	85	12,039	579	8,740	7·0

APP. A. No. 1.

Digest of Vaccination Officers' Returns.

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed
BEDFORD.								
Ampthill	529	459	—	—	65	—	5	0·9
Bedford	1,285	1,117	1	—	119	4	44	3·7
Biggleswade	932	808	—	—	115	1	8	1·0
Leighton Buzzard	617	519	1	—	79	5	13	2·9
Luton	1,341	1,057	2	—	205	23	54	5·7
Woburn	305	262	1	—	35	1	6	2·3
BERKS.								
Abingdon	694	610	—	—	65	4	15	2·7
Bradfield	582	523	1	—	53	—	5	0·9
Cookham	529	479	—	—	34	4	12	3·0
Easthampstead	347	319	—	—	25	—	3	0·9
Faringdon	417	384	—	—	25	3	5	1·9
Hungerford	520	479	—	—	36	2	3	1·0
Newbury	606	507	2	—	56	29	12	6·8
Reading	1,581	1,360	—	—	172	21	28	3·1
Wallingford	392	352	—	—	30	4	6	2·6
Wantage	528	460	2	—	55	—	11	2·1
Windsor	926	802	1	—	90	1	32	3·6
Wokingham	654	578	—	—	41	7	28	5·4
BUCKS.								
Amersham	578	510	—	—	59	6	3	1·6
Aylesbury	758	641	—	—	76	15	26	5·4
Buckingham	348	291	1	—	46	2	8	2·9
Eton	729	653	—	—	70	2	4	0·8
Newport Pagnell	812	713	1	—	79	1	18	2·3
Winslow	228	204	—	—	21	2	1	1·3
Wycombe	1,419	1,241	1	—	148	7	22	2·0
CAMBRIDGE.								
Cambridge	1,040	903	2	—	111	4	20	2·3
Caxton and Arrington	328	288	—	—	30	—	10	3·0
Chesterton	904	806	—	—	69	1	28	3·2
Ely	600	491	—	—	75	12	22	5·7
Linton	397	353	—	—	32	—	12	3·0
Newmarket	874	761	—	—	103	1	9	1·1
North Witchford	475	413	1	—	56	1	4	1·1
Whittlesey	194	165	—	—	26	1	2	1·5
Wisbech	1,032	894	2	—	110	6	20	2·5
CHESTER.								
Altrincham	1,789	1,595	1	—	148	8	37	2·5
Birkenhead	3,661	3,289	7	—	296	5	64	1·9
Chester	1,601	1,402	1	—	155	8	35	2·7
Congleton	1,298	1,131	—	—	132	14	21	2·7
Macclesfield	1,875	1,569	3	—	213	20	70	4·8
Nantwich	2,061	1,635	2	—	223	12	189	9·8
Northwich	1,682	1,503	—	—	161	3	15	1·1
Runcorn	1,249	1,148	1	—	92	1	7	0·6
Stockport	3,862	3,258	4	4	415	25	156	4·7
Tarvin	346	311	1	—	24	4	6	2·9
Wirrall	880	805	2	—	48	8	17	2·8

App. A. No. 1.

Digest of Vaccination Officers' Returns.

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
CORNWALL.								
Austell, St.	940	816	—	—	110	3	11	1·5
Bodmin	519	459	2	—	50	2	6	1·5
Camelford	228	201	—	—	20	2	5	3·1
Columb, St., Major	489	438	—	—	46	—	5	1·0
Falmouth	694	591	—	—	81	5	17	3·2
Germans, St.	490	440	—	—	44	2	4	1·2
Helston	701	554	—	—	106	10	31	5·8
Launceston	465	426	—	—	31	4	4	1·7
Liskeard	815	712	1	—	73	11	18	3·6
Penzance	1,558	1,286	—	—	239	7	26	2·1
Redruth	1,365	1,083	—	—	238	10	34	3·2
Stratton	259	232	—	—	24	2	1	1·2
Truro	946	802	—	—	103	10	31	4·3
CUMBERLAND.								
Alston-with-Garrigill	111	103	—	—	7	—	1	0·9
Bootle	428	388	—	—	33	2	5	1·6
Brampton	303	269	—	—	27	2	5	2·3
Carlisle	1,756	1,556	—	—	159	6	35	2·3
Cockermouth	2,065	1,765	—	—	195	37	68	5·1
Longtown	213	197	—	—	12	3	1	1·9
Penrith	715	662	—	—	44	3	6	1·3
Whitehaven	2,210	1,901	5	—	226	15	63	3·5
Wigton	707	638	—	—	53	6	10	2·3
DERBY.								
Ashbourne	562	496	—	—	39	8	19	4·8
Bakewell	986	838	1	—	102	10	35	4·6
Belper	2,098	1,851	4	—	184	1	58	2·8
Chapel-en-le-Frith	601	502	1	—	63	7	28	5·8
Chesterfield	4,105	3,539	4	—	407	18	137	3·8
Derby	2,858	2,207	2	—	342	10	297	10·7
Glossop	737	631	—	—	72	5	29	4·6
Hayfield	379	336	—	—	31	6	6	3·2
Shardlow	1,643	1,417	2	—	171	3	50	3·2
DEVON.								
Axminster	507	445	1	—	49	—	12	2·4
Barnstaple	1,085	962	—	—	97	13	13	2·4
Bideford	571	505	1	—	51	4	10	2·5
Crediton	521	465	—	—	48	1	7	1·5
East Stonehouse	615	522	—	—	65	10	18	4·6
Exeter	1,166	974	—	—	143	15	34	4·2
Holsworthy	274	250	—	—	16	4	4	2·9
Honiton	688	624	—	—	57	1	6	1·0
Kingsbridge	549	488	—	—	53	2	6	1·5
Newton Abbot	2,103	1,897	3	—	175	5	23	1·3
Okehampton	483	433	—	—	32	11	7	3·7
Plymouth	2,382	1,899	2	—	285	24	172	8·2
Plympton St. Mary	684	604	—	—	49	12	19	4·5
South Molton	463	429	2	—	22	4	6	2·2
Stoke Damerel	1,534	1,355	1	—	122	6	50	3·7
Tavistock	787	720	—	—	64	1	2	0·4
Thomas, St.	1,418	1,266	—	—	110	9	33	3·0
Tiverton	835	727	1	—	71	13	23	4·3
Torrington	425	385	—	—	25	7	8	3·5
Totnes	1,134	1,033	2	—	86	9	4	1·1

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
DORSET.								
Beaminster	334	301	—	—	28	1	4	1·5
Blandford	384	325	—	—	30	3	26	7·6
Bridport	475	427	—	—	40	3	5	1·7
Cerne	180	167	—	—	10	3	—	1·7
Dorchester	525	464	—	—	52	4	5	1·7
Poole	658	586	1	—	55	6	10	2·4
Shaftesbury	351	306	—	—	27	10	8	5·1
Sherborne	380	334	—	—	20	1	5	1·7
Sturminster	296	269	—	—	19	—	8	2·7
Wareham and Purbeck	518	463	—	—	38	4	13	3·3
Weymouth	385	780	2	—	77	11	15	2·9
Wimborne and Cranborne	543	484	—	—	38	6	15	3·9
DURHAM.								
Auckland	3,214	2,697	—	—	384	22	111	4·1
Chester-le-Street	1,758	1,524	—	—	180	8	46	3·1
Darlington	1,660	1,372	2	—	197	6	83	5·4
Durham	2,405	2,012	1	—	272	24	96	5·0
Easington	1,653	1,394	—	—	193	—	66	4·0
Gateshead	4,152	3,275	3	1	507	40	326	8·8
Hartlepool	1,935	1,690	—	—	204	19	22	2·1
Houghton-le-Spring	1,361	1,147	—	—	169	14	31	3·3
Lanchester	2,187	1,932	2	—	212	5	36	1·9
Sedgefield	565	479	—	—	63	2	21	4·1
South Shields	4,240	3,345	1	—	476	60	358	9·9
Stockton	1,885	1,505	1	—	212	20	147	8·9
Sunderland	5,064	4,251	—	—	543	71	199	5·3
Teesdale	600	505	—	—	69	3	23	4·3
Weardale	521	458	—	—	47	5	11	3·1
ESSEX.								
Billericay	536	475	—	2	41	—	18	3·4
Braintree	859	735	—	—	91	11	22	3·8
Chelmsford	1,009	911	—	—	81	7	10	1·7
Colchester	913	769	3	—	100	11	30	4·5
Dunmow	497	454	—	—	37	2	4	1·2
Epping	650	560	—	—	63	1	26	4·2
Halstead	458	400	—	—	48	1	9	2·2
Lexden and Winstree	716	662	—	—	46	4	4	1·1
Maldon	778	704	1	—	50	4	19	3·0
Ongar	305	275	—	—	16	5	9	4·6
Orsett	540	480	—	—	44	5	11	3·0
Rochford	823	723	1	—	76	8	15	2·8
Romford	1,332	1,148	2	—	117	13	52	4·9
Saffron Walden	517	469	—	—	39	2	7	1·7
Tendring	1,079	949	4	—	101	3	22	2·3
West Ham	7,522	6,362	12	—	662	32	454	6·5
GLOUCESTER.								
Barton Regis	5,708	5,048	9	—	473	11	167	3·1
Bristol	1,873	1,566	—	—	189	6	112	6·3
Cheltenham	1,362	1,039	—	—	159	42	122	12·0
Chipping Sodbury	520	456	—	—	49	6	9	2·9
Cirencester	602	520	2	—	63	1	16	2·8
Dursley	351	309	—	—	28	1	13	4·0
Gloucester	1,515	1,346	2	—	135	5	27	2·1
Newent	313	287	—	—	21	—	5	1·6
Northleach	268	236	—	—	20	2	10	4·5

App. A. No. 1.

Digest of Vaccination Officers' Returns.

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
GLOUCESTER—*cont.*								
Stow-on-the-Wold	275	252	—	—	17	—	6	2·2
Stroud	1,257	1,116	—	—	127	4	10	1·1
Tetbury	198	177	—	—	11	5	5	5·0
Tewkesbury	395	352	2	—	26	3	12	3·8
Thornbury	514	471	—	—	28	9	6	2·9
Westbury-on-Severn	824	712	—	—	65	2	45	5·7
Wheatenhurst	221	205	—	—	15	—	1	0·5
Winchcomb	282	242	—	—	31	2	7	3·2
HEREFORD.								
Bromyard	298	232	—	—	38	8	20	9·4
Dore	206	179	—	—	19	3	5	3·9
Hereford	1,029	894	1	—	90	7	37	4·3
Kington	375	327	—	—	34	1	13	3·7
Ledbury	335	292	—	—	28	3	12	4·5
Leominster	410	327	3	—	41	6	33	9·5
Ross	535	466	—	—	45	7	17	4·5
Weobley	232	207	—	—	19	1	5	2·6
HERTS.								
Albans, St.	774	677	1	—	77	3	16	2·5
Barnet	918	814	1	—	88	3	12	1·6
Berkhampstead	500	435	—	—	50	—	15	3·0
Bishop's Stortford	673	617	—	—	46	2	8	1·5
Buntingford	167	153	—	—	9	—	5	3·0
Hatfield	199	176	—	—	14	2	7	4·5
Hemel Hempstead	450	394	—	—	48	—	8	1·8
Hertford	470	429	—	—	33	2	6	1·7
Hitchin	906	838	—	—	63	—	5	0·6
Royston	575	518	—	—	44	6	7	2·4
Ware	548	494	—	—	40	—	14	2·6
Watford	907	811	1	—	81	2	12	1·5
Welwyn	85	78	—	—	5	—	2	2·4
HUNTINGDON.								
Huntingdon	580	505	—	—	63	3	9	2·1
Ives, St.	505	451	—	—	42	6	6	2·4
Neots, St.	473	424	—	—	34	9	6	3·2
KENT (Extra-Metropolitan).								
Ashford, East	418	381	—	—	32	1	4	1·2
Ashford, West	570	510	1	—	43	2	14	2·8
Blean	590	537	—	—	42	1	10	1·9
Bridge	374	339	1	—	23	—	11	2·9
Bromley	1,470	1,292	1	—	149	15	13	1·9
Canterbury	517	439	5	—	52	4	17	4·1
Cranbrook	423	381	1	—	37	3	1	1·0
Dartford	1,767	1,560	3	—	150	17	37	3·1
Dover	1,190	935	1	—	117	27	110	11·5
Eastry	772	684	—	—	52	5	31	4·7
Eltham	1,080	950	1	—	97	9	23	3·0
Faversham	902	820	2	—	73	—	7	0·8
Gravesend and Milton	686	603	1	—	62	2	18	2·9
Hollingbourn	418	369	—	—	34	—	15	3·6
Hoo	122	103	—	—	13	6	—	4·9
Maidstone	1,462	1,253	—	—	135	28	46	5·1

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
KENT (Extra-Metropolitan)—*cont.*								
Malling	927	843	—	—	68	—	16	1·7
Medway	1,994	1,818	2	—	162	6	6	0·6
Milton	949	842	—	—	87	9	11	2·1
North Aylesford	991	879	—	—	109	1	2	0·3
Romney Marsh	215	205	—	—	8	1	1	0·9
Sevenoaks	782	710	3	—	51	2	16	2·3
Sheppey	635	557	—	—	61	6	11	2·7
Tenterden	309	289	—	—	12	—	8	2·6
Thanet, I. of	1,489	1,388	2	—	117	8	24	2·1
Tonbridge	1,534	1,375	1	—	83	25	50	4·9
LANCASTER.								
Ashton-under-Lyne	5,350	4,556	4	—	563	35	192	4·2
Barrow-in-Furness	1,759	1,530	1	—	177	5	46	2·9
Barton-upon-Irwell	2,446	2,146	4	—	205	10	81	3·6
Blackburn	6,334	5,546	2	—	655	32	99	2·1
Bolton	7,000	6,392	1	—	552	1	54	0·8
Burnley	4,320	3,662	—	—	509	34	115	3·4
Bury	4,432	3,925	1	—	394	10	102	2·5
Chorley	1,738	1,468	—	—	177	—	93	5·4
Chorlton	9,082	7,352	5	—	1,049	50	626	7·4
Clitheroe	714	625	1	—	62	6	20	3·6
Fylde, The	1,395	1,184	—	—	158	2	51	3·8
Garstang	377	330	—	—	37	—	10	2·7
Haslingden	3,254	2,946	1	—	275	9	23	1·0
Lancaster	1,331	1,140	—	—	137	12	42	4·1
Leigh	2,289	1,983	3	—	242	10	51	2·7
Liverpool	7,300	6,083	4	—	857	7	349	4·9
Lunesdale	212	196	—	—	12	2	2	1·9
Manchester	5,637	4,526	1	—	621	29	460	8·7
Oldham	5,832	4,497	7	—	712	73	543	10·6
Ormskirk	2,759	2,374	—	—	236	11	88	3·6
Prescot	4,820	4,029	—	—	537	40	214	5·3
Preston	4,597	3,707	1	—	584	84	221	6·6
Prestwich	4,651	3,749	2	—	486	11	403	8·9
Rochdale	3,679	3,196	1	—	369	31	82	3·1
Salford	7,388	5,993	6	—	915	71	403	6·4
Todmorden	1,033	903	1	—	103	—	26	2·5
Toxteth Park	4,489	3,750	15	—	441	28	255	6·3
Ulverston	1,499	1,343	2	—	117	16	21	2·5
Warrington	2,826	2,311	—	—	317	56	142	7·0
West Derby	13,316	11,248	17	—	1,366	147	538	5·1
Wigan	6,037	5,301	3	—	620	28	85	1·9
LEICESTER.								
Ashby-de-la-Zouch	1,236	1,091	—	—	102	—	43	3·5
Barrow-on-Soar	1,093	806	—	—	155	7	125	12·4
Billesdon	271	224	—	—	19	—	28	10·3
Blaby	823	658	—	—	102	5	58	7·7
Hinckley	651	554	—	—	93	—	4	0·6
Leicester	4,860	3,010	5	—	816	14	1,015	21·2
Loughborough	985	834	—	—	120	3	28	3·1
Lutterworth	354	312	—	—	28	—	14	4·0
Market Bosworth	524	461	—	—	50	3	10	2·5
Market Harborough	469	406	1	—	51	3	8	2·3
Melton Mowbray	644	553	—	—	66	1	24	3·9

APP. A. No. 1.

Digest of Vaccination Officers' Returns.

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
LINCOLN.								
Boston	1,180	960	—	—	135	2	83	7·2
Bourn	561	485	—	—	56	6	14	3·6
Caistor	2,403	2,017	—	—	260	22	104	5·2
Gainsborough	1,027	798	1	—	129	34	65	9·6
Glanford Brigg	1,373	1,180	2	—	157	2	32	2·5
Grantham	1,108	941	3	—	113	10	41	4·6
Holbeach	670	574	—	—	63	8	25	4·9
Horncastle	658	572	—	—	70	2	14	2·4
Lincoln	2,111	1,592	1	—	303	55	160	10·2
Louth	1,034	881	—	—	110	8	35	4·2
Sleaford	748	659	—	—	79	—	10	1·3
Spalding	726	626	—	—	71	10	19	4·0
Spilsby	843	688	—	—	87	11	57	8·1
Stamford	552	475	—	—	61	1	15	2·9
MIDDLESEX (EXTRA-METROPOLITAN).								
Brentford	3,415	2,919	6	—	296	13	181	5·7
Edmonton	4,650	4,009	13	—	391	23	214	5·1
Hendon	1,744	1,483	5	—	166	14	76	5·2
Staines	684	593	—	—	52	6	33	5·7
Uxbridge	828	749	—	—	71	4	4	1·0
MONMOUTH.								
Abergavenny	719	648	—	—	58	3	10	1·8
Bedwelty	1,975	1,758	—	—	152	14	51	3·3
Chepstow	531	474	—	—	37	4	16	3·8
Monmouth	944	834	1	—	77	9	23	3·4
Newport	2,538	2,296	3	—	183	16	40	2·2
Pontypool	1,194	1,016	—	—	87	8	83	7·6
NORFOLK.								
Aylsham	559	364	—	—	50	8	137	25·9
Blofield	340	309	—	—	27	1	3	1·2
Depwade	718	615	2	—	68	4	29	4·6
Docking	533	468	—	—	58	2	5	1·3
Downham	616	537	—	—	71	—	8	1·3
Erpingham	597	531	—	—	58	3	5	1·3
Faith, St.	385	338	2	—	39	1	5	1·6
Flegg, East and West	370	299	—	—	58	2	11	3·5
Forehoe	332	291	—	—	29	1	11	3·6
Freebridge Lynn	440	372	—	—	47	6	15	4·8
Guiltcross	326	272	—	—	39	2	13	4·6
Henstead	317	284	2	—	25	—	6	1·9
King's Lynn	580	495	—	—	68	3	14	2·9
Loddon and Clavering	420	377	—	—	36	2	5	1·7
Mitford and Launditch	841	760	—	—	72	4	5	1·1
Norwich	2,976	2,496	1	—	413	3	63	2·2
Swaffham	377	317	—	—	49	4	7	2·9
Thetford	554	475	—	—	54	2	23	4·5
Smallburgh	456	399	—	—	49	1	7	1·8
Walsingham	614	528	—	—	65	4	17	3·4
Wayland	343	300	—	—	32	6	5	3·2
Yarmouth, Great	1,230	1,061	—	—	140	13	16	2·4

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
NORTHAMPTON.								
Brackley	331	255	2	—	44	9	21	9·1
Brixworth	391	348	—	—	33	—	10	2·6
Daventry	532	463	2	—	58	—	9	1·7
Hardingstone	357	307	1	—	39	—	10	2·8
Kettering	906	764	3	—	103	6	30	4·0
Northampton	2,347	1,774	3	—	334	8	228	10·1
Oundle	401	355	—	—	40	—	6	1·5
Peterborough	1,490	1,326	—	—	135	—	29	1·9
Potterspury	411	361	—	—	41	2	7	2·2
Thrapston	538	467	—	—	60	3	8	2·0
Towcester	408	356	1	—	42	3	6	2·2
Wellingborough	1,268	1,078	1	—	134	14	41	4·3
NORTHUMBERLAND.								
Alnwick	612	536	—	—	41	24	11	5·7
Belford	155	137	4	—	14	—	—	0·0
Bellingham	144	129	—	—	10	—	5	3·5
Berwick-on-Tweed	651	572	1	—	63	6	9	2·3
Castle Ward	636	524	1	—	66	3	42	7·1
Glendale	258	225	1	—	27	—	5	1·9
Haltwhistle	258	232	—	—	22	4	—	1·6
Hexham	1,077	925	—	—	93	5	54	5·5
Morpeth	1,423	1,233	2	—	160	2	26	2·0
Newcastle-on-Tyne	5,540	4,807	8	—	557	37	131	3·0
Rothbury	168	150	—	—	12	—	6	3·6
Tynemouth	4,285	3,695	6	—	475	69	140	4·9
NOTTINGHAM.								
Basford	4,753	3,979	8	—	576	22	173	4·1
Bingham	446	377	1	—	63	1	4	1·1
East Retford	721	655	—	—	53	1	12	1·8
Mansfield	1,783	1,447	1	—	238	14	83	5·4
Newark	1,013	882	2	—	96	4	29	3·3
Nottingham	5,339	4,091	11	—	721	43	473	9·7
Southwell	565	495	—	—	52	1	17	3·2
Worksop	1,033	918	—	—	99	5	11	1·5
OXFORD.								
Banbury	912	676	1	—	92	18	125	15·7
Bicester	404	350	—	—	43	5	6	2·7
Chipping Norton	604	519	—	—	62	9	14	3·8
Headington	935	820	—	—	96	5	14	2·0
Henley	615	547	—	—	52	1	15	2·6
Oxford	727	623	4	—	72	6	22	3·9
Thame	443	389	—	—	43	1	10	2·5
Witney	680	615	—	—	54	6	5	1·6
Woodstock	405	347	1	—	47	3	7	2·5
RUTLAND.								
Oakham	321	284	—	—	31	1	5	1·9
Uppingham	371	330	—	—	31	3	7	2·7

App. A. No. 1.

Digest of Vaccination Officers' Returns.

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for including Cases postponed.
SALOP.								
Atcham	1,307	1,154	1	—	109	23	20	3·3
Bridgnorth	427	382	—	—	26	2	17	4·4
Church Stretton	137	125	—	—	8	—	4	2·9
Cleobury Mortimer	221	203	—	—	15	1	2	1·4
Clun	292	238	—	—	34	9	11	6·8
Drayton	395	360	—	—	30	5	—	1·3
Ellesmere	383	340	—	—	35	—	8	2·1
Ludlow	543	456	1	—	55	5	26	5·7
Madeley	844	743	1	—	74	4	22	3·1
Newport	446	395	—	—	39	2	10	2·7
Oswestry	844	751	—	—	77	2	14	1·9
Shifnal	373	316	—	—	37	6	14	5·4
Wellington	926	801	—	—	100	7	18	2·7
Wem	258	240	1	—	13	3	1	1·6
Whitchurch	356	316	—	—	29	3	8	3·1
SOMERSET.								
Axbridge	1,164	1,025	1	—	95	14	29	3·7
Bath	1,837	1,501	—	—	218	37	81	6·4
Bedminster	2,499	2,191	1	—	254	17	36	2·1
Bridgwater	1,032	906	1	—	88	3	34	3·6
Chard	846	741	—	—	84	6	15	2·5
Clutton	817	738	—	—	70	—	9	1·1
Dulverton	144	138	—	—	5	—	1	0·7
Frome	692	636	—	—	43	—	13	1·9
Keynsham	906	805	—	—	75	4	22	2·9
Langport	447	400	—	—	32	4	11	3·4
Shepton Mallet	474	429	—	—	35	4	6	2·1
Taunton	1,035	923	1	—	90	11	10	2·0
Wellington	576	527	—	—	46	1	2	0·5
Wells	632	548	—	—	51	14	19	5·2
Williton	523	480	—	—	33	3	7	1·9
Wincanton	553	488	—	—	53	—	12	2·2
Yeovil	853	742	—	—	69	20	22	4·9
SOUTHAMPTON.								
Alresford	185	165	—	—	14	2	4	3·2
Alton	495	443	—	—	36	2	14	3·2
Alverstoke	700	637	1	—	60	—	2	0·3
Andover	427	373	—	—	39	5	10	3·5
Basingstoke	625	543	—	—	47	17	18	5·6
Catherington	73	59	—	—	4	1	9	13·7
Christchurch	846	727	2	—	75	13	29	5·0
Droxford	322	296	—	—	19	2	5	2·2
Fareham	439	397	—	—	27	—	15	3·4
Fordingbridge	155	137	—	—	17	—	1	0·6
Hartley Wintney	549	488	—	—	34	2	25	4·9
Havant	281	257	—	—	16	2	6	2·8
Hursley	82	72	—	—	8	1	1	2·4
Kingsclere	239	216	—	—	20	2	1	1·3
Lymington	382	329	—	—	33	—	20	5·2
New Forest	345	304	1	—	28	1	11	3·5
Petersfield	315	293	—	—	18	1	3	1·3
Portsea Island	4,420	3,930	11	—	379	19	81	2·3
Ringwood	136	127	—	—	7	—	2	1·5
Romsey	359	307	—	—	38	2	12	3·9
Southampton	1,748	1,430	3	—	196	18	101	6·8
South Stoneham	1,320	1,128	1	—	125	20	46	5·0
Stockbridge	203	176	—	—	21	2	4	3·0
Whitchurch	176	154	—	—	10	5	7	6·8
Wight, Isle of	2,150	1,896	2	—	176	5	71	3·5
Winchester, New	903	814	1	—	79	2	7	1·0

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-Pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
STAFFORD.								
Wolstanton and Burslem	3,007	2,586	—	—	302	6	23	1·0
Burton-on-Trent	2,916	2,445	1	—	259	21	190	7·2
Cannock	1,342	1,149	—	—	143	4	46	3·7
Cheadle	740	673	1	—	56	4	6	1·4
Leek	1,100	948	1	—	109	13	29	3·8
Lichfield	1,230	1,074	5	—	114	6	31	3·0
Newcastle-under-Lyme	1,273	1,083	—	—	116	2	72	5·8
Seisdon	485	430	1	—	43	—	11	2·3
Stafford	938	816	4	—	86	8	24	3·4
Stoke-upon-Trent	4,170	3,448	—	—	537	16	169	4·4
Stone	935	808	1	—	100	2	24	2·8
Tamworth	726	618	—	—	75	5	28	4·6
Uttoxeter	416	390	—	—	19	—	7	1·7
Walsall	3,285	2,809	3	—	359	6	108	3·5
West Bromwich	4,938	4,359	3	—	472	14	90	2·1
Wolverhampton	4,921	4,221	2	—	533	5	160	3·4
SUFFOLK.								
Blything	824	743	—	—	61	4	16	2·4
Bosmere and Claydon	499	429	1	—	42	—	27	5·4
Bury St. Edmunds	500	423	—	—	62	3	12	3·0
Cosford	489	441	—	—	43	—	5	1·0
Hartismere	507	460	—	—	38	1	8	1·8
Hoxne	401	362	—	—	32	1	6	1·7
Ipswich	1,632	1,348	1	1	179	39	64	6·3
Mildenhall	300	264	—	—	24	—	12	4·0
Mutford and Lothingland	1,468	1,295	—	—	147	9	17	1·8
Plomesgate	588	511	—	—	56	6	15	3·6
Risbridge	578	522	—	—	47	2	7	1·6
Samford	378	334	—	—	32	3	9	3·2
Stow	656	581	—	—	63	4	8	1·8
Sudbury	852	749	—	—	64	17	22	4·6
Thingoe	507	446	—	—	49	6	6	2·4
Wangford	435	393	—	—	38	—	4	0·9
Woodbridge	715	644	—	—	59	3	9	1·7
SURREY (Extra-Metropolitan).								
Chertsey	849	735	—	—	62	24	28	6·1
Croydon	3,629	2,959	3	—	343	49	275	8·9
Dorking	466	434	—	—	26	—	6	1·3
Epsom	1,115	915	1	—	121	25	53	7·0
Farnham	1,505	1,303	3	—	138	8	53	4·1
Godstone	421	372	—	—	30	1	18	4·5
Guildford	1,216	1,105	—	—	92	6	13	1·6
Hambledon	464	425	—	—	32	2	5	1·5
Kingston	2,329	2,107	2	—	183	13	24	1·6
Reigate	901	816	—	—	71	4	10	1·6
Richmond	1,099	912	1	1	80	—	15	1·5
SUSSEX.								
Battle	453	393	—	—	45	5	10	3·3
Brighton	2,912	2,535	4	1	265	22	85	3·7
Chailey	286	251	—	—	24	5	6	3·8
Chichester	254	206	1	—	29	5	13	7·1
Cuckfield	748	650	—	—	57	10	31	5·5
Eastbourne	829	711	2	—	76	9	31	4·8
East Grinstead	604	518	1	—	48	7	30	6·1
East Preston	745	658	—	—	68	4	15	2·6

App. A. No. 1.

Digest of Vaccination Officers' Returns.

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
SUSSEX—*cont.*								
Hailsham	440	392	—	—	30	6	12	4·1
Hastings	1,375	1,110	—	—	144	35	86	8·8
Horsham	676	609	4	—	44	2	17	2·8
Lewes	346	290	1	—	33	9	13	6·4
Midhurst	422	391	—	—	24	3	4	1·7
Newhaven	276	226	1	—	25	1	23	8·7
Petworth	267	248	—	—	12	6	1	2·6
Rye	410	364	3	—	37	—	6	1·5
Steyning	1,524	1,361	2	1	117	5	38	2·8
Thakeham	267	243	—	—	15	9	—	3·4
Ticehurst	521	475	1	—	29	2	14	3·1
Uckfield	706	633	2	—	46	1	24	3·5
Westbourne	234	214	—	—	13	2	5	3·0
West Firle	65	58	—	—	5	1	1	3·1
Westhampnett	580	523	1	—	47	2	7	1·6
WARWICK.								
Alcester	619	527	—	—	66	7	19	4·2
Aston	8,372	7,009	11	—	850	44	458	6·0
Atherstone	514	458	1	—	45	—	10	1·9
Birmingham	9,225	8,015	10	—	967	19	214	2·5
Coventry	1,432	1,226	2	—	170	6	28	2·4
Foleshill	652	578	—	—	66	6	2	1·2
Meriden	278	252	—	—	16	5	5	3·6
Nuneaton	498	414	—	—	67	5	12	3·4
Rugby	871	753	—	—	84	—	34	3·9
Solihull	563	497	—	—	46	5	15	3·6
Southam	308	274	—	—	29	2	3	1·6
Stratford-on-Avon	670	594	1	—	50	—	25	3·7
Warwick	1,453	1,303	5	—	119	3	23	1·8
WESTMORELAND.								
East Ward	446	411	—	—	28	5	2	1·6
Kendal	1,315	1,209	2	—	82	13	9	1·7
West Ward	233	220	—	—	10	1	2	1·3
WILTS.								
Alderbury	777	696	—	—	69	3	9	1·5
Amesbury	203	186	—	—	16	—	1	0·5
Bradford	315	291	—	—	21	—	3	1·0
Calne	237	223	—	—	9	4	1	2·1
Chippenham	648	596	1	—	40	4	7	1·7
Cricklade and Wootton Bassett.	358	306	2	—	35	6	9	4·2
Devizes	594	530	—	—	48	5	11	2·7
Highworth and Swindon	1,399	1,211	—	—	137	14	37	3·6
Malmesbury	425	377	—	—	32	9	7	3·8
Marlborough	263	248	—	—	8	—	7	2·7
Melksham	543	490	—	—	46	1	6	1·3
Mere	194	176	—	—	17	1	—	0·5
Pewsey	361	332	—	—	20	2	7	2·5
Tisbury	258	231	—	—	25	1	1	0·8
Warminster	411	375	—	—	23	5	8	3·2
Westbury and Whorwelsdown.	329	296	—	—	30	1	2	0·9
Wilton	295	274	—	—	19	—	2	0·7

App. A. No. 1.

Digest of Vaccination Officers' Returns.

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
WORCESTER.								
Bromsgrove	1,033	901	1	—	108	8	15	2·2
Droitwich	825	721	—	—	75	5	24	3·5
Dudley	5,779	5,028	3	—	607	35	106	2·4
Evesham	411	367	—	—	24	4	16	4·9
Kidderminster	1,382	1,219	—	—	134	9	20	2·1
King's Norton	3,041	2,511	2	—	309	31	188	7·2
Martley	438	384	—	—	40	3	11	3·2
Pershore	416	368	—	—	44	—	4	1·0
Shipston-on-Stour	511	446	1	—	47	3	14	3·3
Stourbridge	3,055	2,651	—	—	294	19	91	3·6
Tenbury	221	187	—	—	18	8	8	7·2
Upton-on-Severn	551	505	1	—	42	5	8	2·3
Worcester	1,026	829	—	—	130	16	51	6·5
YORK, East Riding.								
Beverley	743	628	—	—	77	11	27	5·1
Bridlington	552	468	1	—	65	6	12	3·3
Driffield	699	576	—	—	102	5	16	3·0
Howden	397	348	—	—	39	1	9	2·5
Kingston-upon-Hull	2,830	2,371	5	—	340	15	99	4·0
Patrington	279	243	—	—	23	—	13	4·7
Pocklington	487	406	2	—	63	8	9	3·5
Sculcoates	3,657	3,057	3	—	410	17	170	4·1
Skirlaugh	307	259	—	—	38	—	10	3·3
York	2,457	1,930	—	—	292	21	214	9·6
YORK, North Riding.								
Aysgarth	184	161	1	—	18	2	2	2·2
Bedale	247	219	—	—	24	2	2	1·6
Easingwold	282	243	—	—	31	1	7	2·8
Guisborough	1,640	1,396	—	—	197	6	41	2·9
Helmsley Blackmoor	181	163	—	—	16	—	2	1·1
Kirkby Moorside	150	130	—	—	17	2	1	2·0
Leyburn	215	193	—	—	18	1	3	1·9
Malton	754	593	3	—	99	22	37	7·8
Middlesbrough	3,454	2,910	2	—	432	29	81	3·2
Northallerton	379	335	—	—	31	3	10	3·4
Pickering	349	293	1	—	34	3	18	6·0
Reeth	139	123	—	—	13	1	2	2·2
Richmond	416	375	—	—	32	2	7	2·2
Scarborough	1,427	1,168	—	—	166	29	64	6·5
Stokesley	359	311	—	—	36	4	8	3·3
Thirsk	422	361	1	—	45	3	12	3·6
Whitby	901	805	—	—	68	8	20	3·1
YORK, West Riding.								
Barnsley	3,342	2,668	—	—	425	53	196	7·5
Bramley	2,021	1,738	—	—	217	20	46	3·3
Bradford	6,416	5,057	4	—	780	13	562	9·0
Bierley, North	4,188	3,478	6	—	457	39	208	5·9
Dewsbury	5,379	3,754	9	—	713	82	821	16·8
Doncaster	1,943	1,669	—	—	224	10	40	2·6
Ecclesall Bierlow	4,068	3,488	7	—	394	17	162	4·4
Goole	712	626	1	—	69	1	15	2·2
Halifax	5,517	4,710	5	—	584	53	165	4·0

App. A. No. 1.

Digest of Vaccination Officers' Returns.

	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
YORK, West Riding—*cont.*								
Hemsworth	350	311	—	—	26	2	11	3·7
Holbeck	894	779	1	—	92	5	17	2·5
Huddersfield	4,843	4,301	2	—	488	8	44	1·1
Hunslet	2,430	1,959	3	—	310	55	103	6·5
Keighley	1,882	465	1	—	222	24	1,170	53·4
Knaresborough	678	549	3	—	84	8	34	6·2
Leeds	6,775	6,033	4	—	663	2	73	1·1
Ouseburn, Great	361	319	2	—	37	—	3	0·8
Pateley Bridge	276	254	1	—	17	1	3	1·4
Penistone	651	548	2	—	80	12	9	3·2
Pontefract	1,955	1,626	1	—	225	1	102	5·3
Ripon	458	390	—	—	36	8	24	7·0
Rotherham	2,999	2,501	4	—	358	25	111	4·5
Saddleworth	664	575	—	—	62	—	27	4·1
Sedbergh	128	119	—	—	8	1	—	0·8
Selby	531	470	—	—	52	5	4	1·7
Settle	442	396	—	—	35	5	6	2·5
Sheffield	7,225	5,970	5	—	871	20	359	5·2
Skipton	1,198	981	10	—	135	12	60	6·0
Tadcaster	843	701	—	—	93	3	46	5·8
Thorne	510	432	—	—	56	5	17	4·3
Wakefield	3,482	2,953	3	—	328	19	179	5·7
Wetherby	436	336	1	—	46	15	38	12·2
Wharfedale	1,512	1,238	2	—	169	26	77	6·8
Wortley	1,319	1,126	3	—	124	11	55	5·0
ANGLESEY.								
Anglesey	404	355	—	—	34	3	12	3·7
Holyhead	615	524	—	—	60	7	24	5·0
BRECKNOCK.								
Brecknock	495	436	—	—	48	—	11	2·2
Builth	230	206	—	—	19	1	4	2·2
Crickhowell	596	485	—	—	79	2	30	5·4
Hay	304	276	—	—	25	3	—	1·0
CARDIGAN.								
Aberaeron	352	312	—	—	31	1	8	2·6
Aberystwith	678	572	—	—	67	19	20	5·8
Cardigan	455	423	—	—	29	2	1	0·7
Lampeter	307	274	—	—	23	4	6	3·3
Tregaron	298	264	—	—	28	—	6	2·0
CARMARTHEN.								
Carmarthen	1,051	938	—	—	105	—	8	0·8
Llanelly	1,656	1,482	—	—	142	9	23	1·9
Llandilo Fawr	544	480	—	—	56	2	6	1·5
Llandovery	450	395	—	—	46	4	5	2·0
Newcastle-in-Emlyn	533	501	—	—	30	—	2	0·4

—	Returns, 1880.							
	Births.	Successfully Vaccinated.	Insusceptible of Vaccination.	Had Small-pox.	Dead. Unvaccinated.	Vaccination postponed.	Remaining.	Per-centage of Children not finally accounted for, including Cases postponed.
CARNARVON.								
Bangor and Beaumaris	1,087	978	—	—	90	4	15	1·7
Carnarvon	1,413	1,237	3	—	135	19	19	2·7
Conway	511	440	1	—	40	6	24	5·9
Pwllheli	634	566	—	—	51	12	5	2·7
DENBIGH.								
Llanrwst	407	362	—	—	34	7	4	2·7
Ruthin	392	357	—	—	33	1	1	0·5
Wrexham	1,906	1,675	—	—	185	9	37	2·4
FLINT.								
Asaph, St.	831	742	—	—	77	4	8	1·4
Hawarden	528	485	—	—	37	3	3	1·1
Holywell	1,424	1,251	—	—	119	12	42	3·8
GLAMORGAN.								
Bridgend and Cowbridge	1,215	1,041	—	—	105	7	62	5·7
Cardiff	3,626	2,938	6	—	380	9	293	8·3
Gower	354	327	—	—	17	4	6	2·8
Merthyr Tydfil	3,493	3,101	—	—	304	16	72	2·5
Neath	1,905	1,690	1	—	168	12	34	2·4
Pontardawe	701	630	—	—	57	6	8	2·0
Pontypridd	3,447	2,939	—	—	345	42	121	4·7
Swansea	3,604	3,180	—	—	314	25	85	3·1
MERIONETH.								
Bala	184	162	—	—	18	3	1	2·2
Corwen	502	418	1	—	53	5	25	6·0
Dolgelley	453	395	—	—	46	9	3	2·6
Festiniog	1,016	856	—	—	122	22	16	3·7
MONTGOMERY.								
Llanfyllin	554	493	—	—	37	13	11	4·3
Machynlleth	336	268	—	—	44	10	14	7·1
Forden	512	439	—	—	45	6	22	5·5
Newtown and Llanidloes	800	658	—	—	80	16	46	7·7
PEMBROKE.								
Haverfordwest	1,023	878	—	—	109	17	19	3·5
Narberth	588	518	—	—	37	14	19	5·6
Pembroke	993	871	—	—	93	23	6	2·9
RADNOR.								
Knighton	335	285	—	—	39	7	4	3·3
Rhayader	219	194	—	—	17	1	7	3·7

App. A. No. 2.

Inspection of Public Vaccination.

No. 2.

List (alphabetically arranged) of 284 Unions inspected during the Year 1882, with reference to the Proceedings under the Vaccination Acts, 1867 and 1871, and an Account of the Awards made to the respective Public Vaccinators out of Moneys voted by Parliament for that Purpose.

Union.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Abergavenny	3	3	—	6 12 0	27 17 0	59 9 0	Mr. Spear.
Abingdon	6	5	—	3 12 0	16 2 0	42 11 0	Dr. Stevens.
Alnwick	7	2	—	12 8 0	16 17 0	29 5 0	Mr. Power.
Alresford	2	2	—	6 8 0	7 8 0	13 16 0	Dr. Stevens.
Alton	4	3	—	5 1 0	11 18 0	24 5 0	Do.
Alverstoke	1	1	—	—	—	46 0 0	Do.
Amersham	6	3	—	8 9 0	23 0 0	40 10 0	„ Thorne.
Andover	5	5	—	1 10 0	14 15 0	35 13 0	„ Stevens.
Ashby-de-la-Zouch	6	2	—	15 8 0	22 6 0	37 14 0	„ Parsons.
Atcham	6	3	—	6 9 0	39 10 0	55 12 0	Do.
Axminster	12	2	—	6 12 0	7 12 0	14 4 0	„ Ballard.
Aylesbury	7	5	—	7 1 0	9 9 0	41 7 0	„ Thorne.
Aysgarth	2	—	—	—	—	—	Mr. Power.
Barnsley	5	5	—	19 9 0	83 4 0	238 19 0	Dr. Barry.
Barnstaple	10	7	1	0 4 0	20 8 0	49 14 8	„ Ballard.
Barrow-on-Soar	5	2	—	5 4 0	8 3 0	13 7 0	„ Parsons.
Barton Regis	6	6	—	17 10 0	75 18 0	226 16 0	„ Blaxall.
Basford	13	6	—	7 11 0	29 1 0	87 1 0	Do.
Basingstoke	6	6	—	0 8 0	13 18 0	36 2 0	„ Stevens.
Bath	5	2	1	3 9 4	8 15 0	17 12 4	„ Blaxall.
Bedale	3	3	—	3 12 0	13 13 0	23 0 0	Mr. Power.
Bedwelty	6	4	—	7 17 0	46 18 0	111 2 0	„ Spear.
Belford	2	—	—	—	—	—	„ Power.
Bellingham	6	—	—	—	—	—	Do.
Beverley	5	3	—	4 2 0	22 5 0	31 3 0	Mr. Spear.
Bideford	7	4	—	0 7 0	10 12 0	24 4 0	Dr. Ballard.
Billesdon	3	—	—	—	—	—	„ Parsons.
Bingham	4	3	—	4 18 0	10 7 0	21 6 0	„ Blaxall.
Birmingham	1	1	—	—	—	247 11 0	„ Stevens.
Blaby	3	—	—	—	—	—	„ Parsons.
Blofield	3	2	—	11 11 0	14 5 0	25 16 0	„ Airy.
Bourn	7	1	—	—	—	9 15 0	„ Parsons.
Bradfield	6	6	—	4 12 0	11 13 0	43 9 0	„ Stevens.
Bramley	5	2	—	41 0 0	42 15 0	83 15 0	„ Parsons.
Brentford	8	4	1	14 3 0	41 9 0	121 17 4	Mr. Power.
Bridgnorth	3	2	—	3 15 0	8 2 0	11 17 0	Dr. Parsons.
Bridlington	4	—	—	—	—	—	Mr. Spear.
Brixworth	6	3	—	2 12 0	9 13 0	18 12 0	Dr. Parsons.
Bromsgrove	5	4	—	1 9 0	27 13 0	54 19 0	Mr. Spear.
Bromyard	3	—	—	—	—	—	Do.
Buckingham	3	3	—	4 4 0	14 15 0	26 8 0	Dr. Thorne.
Burton-on-Trent	8	4	1	4 4 0	45 4 0	83 3 8	„ Parsons.
Cannock	6	1	—	—	—	8 4 0	Dr. Parsons.
Catherington	1	1	—	—	—	5 11 0	„ Stevens.
Cheadle	5	2	—	10 3 0	14 10 0	24 13 0	„ Parsons.
Cheltenham	3	—	—	—	—	—	„ Blaxall.
Chepstow	5	3	—	7 2 0	14 11 0	31 10 0	Mr. Spear.
Chertsey	5	4	—	3 3 0	15 12 0	35 5 0	Dr. Stevens.
Chipping Sodbury	5	2	—	2 9 0	2 17 0	5 6 0	„ Blaxall.
Christchurch	2	2	—	8 14 0	41 1 0	49 15 0	„ Stevens.
Church Stretton	4	2	—	3 9 0	4 4 0	7 13 0	„ Parsons.

UNION.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Cirencester	4	1	—	—	—	8 1 0	Dr. Blaxall.
Cleobury Mortimer	2	—	—	—	—	—	„ Parsons.
Clitheroe	5	5	—	5 1 0	34 7 0	87 8 0	Mr. Spear.
Clun	4	1	—	—	—	5 18 0	Dr. Parsons.
Cookham	4	1	—	—	—	17 6 0	„ Stevens.
Coventry	1	1	—	—	—	90 17 0	Do.
Crediton	11	2	1	0 4 8	3 15 0	7 10 8	„ Ballard.
Croydon	7	6	—	4 16 0	84 0 0	155 2 0	„ Stevens.
Darlington	5	2	—	6 1 0	55 7 0	61 8 0	Mr. Spear.
Daventry	6	2	—	6 8 0	6 17 0	13 5 0	Dr. Parsons.
Doncaster	7	5	—	7 17 0	51 6 0	120 5 0	„ Barry.
Dore	3	3	—	3 19 0	6 10 0	16 10 0	Mr. Spear.
Dorking	4	4	—	1 14 0	9 16 0	29 15 0	Dr. Stevens.
Drayton	5	1	1	1 16 0	9 16 0	11 12 0	„ Parsons.
Driffield	8	4	—	3 1 0	17 14 0	32 18 0	Mr. Spear.
Droitwich	6	5	—	1 9 0	22 3 0	45 5 0	Do.
Droxford	4	3	—	5 17 0	7 16 0	20 14 0	Dr. Stevens.
Dudley	8	6	1	16 10 8	63 6 0	254 0 8	Mr. Spear.
Dursley	3	1	—	—	—	8 15 0	Dr. Blaxall.
Easingwold	4	1	—	—	—	9 15 0	Mr. Power.
East Hampstead	4	1	—	—	—	4 6 0	Dr. Stevens.
East Retford	6	3	—	2 18 0	6 5 0	14 5 0	„ Blaxall.
East Stonehouse	1	1	—	—	—	46 13 0	„ Ballard.
Ecclesall Bierlow	3	1	—	—	—	131 3 0	„ Parsons.
Edmonton	13	8	—	3 19 0	90 14 0	220 19 0	Mr. Power.
Ellesmere	7	4	1	2 0 8	7 9 0	19 13 8	Dr. Parsons.
Epsom	8	7	—	3 1 0	17 11 0	60 15 0	„ Stevens.
Erpingham	3	1	—	—	—	13 8 0	„ Airy.
Eton	8	7	—	5 6 0	19 11 0	74 16 0	„ Thorne.
Evesham	5	3	—	1 6 0	13 14 0	21 10 0	Mr. Spear.
Fareham	5	4	—	3 14 0	14 13 0	30 15 0	Dr. Stevens.
Farnham	6	6	—	2 5 0	40 14 0	79 16 0	Do.
Faringdon	4	4	—	2 7 0	10 13 0	26 14 0	Do.
Flegg, East and West	4	—	—	—	—	—	„ Airy.
Fordingbridge	2	2	—	6 15 0	7 12 0	14 7 0	„ Stevens.
Fulham	3	2	—	31 10 0	45 11 0	77 1 0	Do.
George's, St.	4	4	—	7 5 0	75 14 0	142 17 0	Dr. Stevens.
Giles, St., and St. George, Bloomsbury	1	1	—	—	—	58 3 0	Do.
Glanford Brigg	9	1	—	—	—	13 11 0	„ Parsons.
Gloucester	2	1	—	—	—	21 13 0	„ Blaxall.
Godstone	5	4	—	4 13 0	7 16 0	24 15 0	„ Stevens.
Goole	5	4	—	4 8 0	7 4 0	21 8 0	Mr. Spear.
Grantham	7	4	—	3 10 0	19 10 0	36 0 0	Dr. Parsons.
Greenwich	2	2	—	72 5 0	124 15 0	197 0 0	„ Stevens.
Guildford	9	9	—	3 4 0	18 18 0	80 18 0	Do.
Guisborough	4	1	1	23 6 0	38 17 0	62 3 0	Mr. Power.
Hambledon	5	4	—	4 14 0	11 19 0	32 8 0	Dr. Stevens.
Hartley Wintney	6	5	—	5 1 0	8 15 0	35 7 0	Do.
Havant	3	3	—	4 2 0	7 9 0	16 3 0	Do.
Helmsley Blackmoor	2	2	—	5 14 0	12 11 0	18 5 0	Mr. Power.
Hemsworth	4	3	—	2 18 0	21 12 0	39 10 0	Dr. Barry.
Hendon	7	3	—	4 19 0	69 5 0	88 14 0	Mr. Power.
Hereford	4	4	—	10 4 0	38 7 0	79 5 0	„ Spear.
Hinckley	5	2	—	12 0 0	26 17 0	38 17 0	Dr. Parsons.
Holbeach	6	—	—	—	—	—	Do.
Holbeck	1	1	—	—	—	73 6 0	„ Barry.
Holborn	4	4	—	45 17 0	64 3 0	225 2 0	„ Stevens.
Holsworthy	5	1	—	—	—	10 0 0	„ Ballard.
Honiton	12	2	—	1 15 0	11 5 0	13 0 0	Do.
Howden	4	1	—	—	—	5 13 0	Mr. Spear.
Hungerford	5	5	—	6 3 0	13 4 0	43 7 0	Dr. Stevens.
Hursley	1	1	—	—	—	5 6 0	Do.

App. A. No. 2.

Inspection of Public Vaccination.

UNION.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Keighley	4	—	—	—	—	—	Dr. Barry.
Kensington	2	2	—	48 9 0	124 8 0	172 17 0	„ Stevens.
Kettering	4	1	—	—	—	12 6 0	„ Parsons.
Kidderminster	5	3	—	6 11 0	54 14 0	71 7 0	Mr. Spear.
Kingsbridge	5	3	—	1 16 0	8 4 0	12 16 0	Dr. Ballard.
Kingsclere	3	1	—	—	—	4 9 0	„ Stevens.
King's Norton	7	6	—	8 3 0	54 7 0	131 2 0	Mr. Spear.
Kingston-on-Hull	2	2	—	32 0 0	91 4 0	123 4 0	Dr. Airy.
Kingston-on-Thames	11	9	—	3 1 0	27 15 0	88 1 0	„ Stevens.
Kington	5	3	—	2 19 0	8 17 0	16 1 0	Mr. Spear.
Kirkby Moorside	1	1	—	—	—	13 11 0	„ Power.
Knaresborough	3	1	—	—	—	19 10 0	Dr. Barry.
Lancaster	5	2	—	3 3 0	15 3 0	18 6 0	Dr. Barry.
Ledbury	3	2	—	8 3 0	8 14 0	16 17 0	Mr. Spear.
Leeds	7	6	—	2 3 0	53 11 0	161 8 0	Dr. Stevens.
Leek	5	2	—	7 1 0	14 12 0	21 13 0	„ Parsons.
Leicester	2	2	—	25 16 0	73 19 0	99 15 0	„ Do.
Leigh	3	2	—	29 19 0	75 3 0	105 2 0	„ Barry.
Leominster	3	3	—	2 4 0	24 17 0	33 19 0	Mr. Spear.
Leyburn	6	2	—	4 4 0	7 17 0	12 1 0	„ Power.
Lichfield	6	4	—	3 16 0	26 18 0	70 13 0	Dr. Parsons.
Liverpool	3	3	—	47 0 0	94 11 0	211 9 0	„ Stevens.
Loughborough	4	3	—	6 11 0	38 15 0	62 12 0	„ Parsons.
Ludlow	5	1	—	—	—	4 7 0	„ Do.
Lunesdale	5	5	—	0 6 0	10 3 0	19 12 0	„ Barry.
Lutterworth	5	4	—	3 12 0	9 7 0	22 14 0	„ Parsons.
Lymington	4	2	—	1 1 0	7 2 0	8 3 0	„ Stevens.
Madeley	4	2	—	8 1 0	27 3 0	35 4 0	Dr. Parsons.
Malton	6	3	—	8 2 0	10 5 0	28 0 0	Mr. Power.
Manchester	3	3	—	41 3 0	53 5 0	140 13 0	Dr. Stevens.
Mansfield	6	3	—	6 6 0	29 13 0	45 8 0	„ Blaxall.
Market Bosworth	6	4	—	2 2 0	12 8 0	25 10 0	„ Parsons.
Market Harborough	5	—	—	—	—	—	Do.
Martley	6	3	—	3 15 0	7 8 0	18 0 0	Mr. Spear.
Melton Mowbray	6	3	—	5 6 0	6 18 0	17 16 0	Dr. Parsons.
Middlesbrough	4	4	—	16 0 0	171 1 0	287 16 0	Mr. Power.
Monmouth	6	1	—	—	—	4 16 0	„ Spear.
Morpeth	8	3	—	9 14 0	40 17 0	61 15 0	„ Power.
Newark	9	4	—	1 2 0	5 9 0	13 17 0	Dr. Blaxall.
Newbury	3	2	—	9 2 0	14 8 0	23 10 0	„ Stevens.
Newcastle-under-Lyme.	3	—	—	—	—	—	„ Parsons.
Newcastle-on-Tyne	3	4	—	28 0 0	58 5 0	147 3 0	„ Stevens.
Newent	3	1	—	—	—	7 1 0	„ Blaxall.
New Forest	5	5	—	0 18 0	13 2 0	28 12 0	„ Stevens.
Newport (Salop)	4	1	—	—	—	6 2 0	„ Parsons.
Newport Pagnell	9	5	—	1 3 0	24 12 0	48 8 0	„ Thorne.
Newton Abbot	11	6	—	5 8 0	37 5 0	103 5 0	„ Ballard.
Northallerton	4	1	—	—	—	2 18 0	Mr. Power.
Northampton	4	2	—	13 8 0	28 11 0	41 19 0	Dr. Parsons.
Northleach	5	3	—	2 5 0	7 18 0	15 12 0	„ Blaxall.
Norwich	1	—	—	—	—	—	„ Airy.
Nottingham	3	2	—	56 17 0	65 2 0	121 19 0	„ Blaxall.
Okehampton	6	1	—	—	—	6 0 0	Dr. Ballard.
Olave, St.	3	3	—	94 19 0	137 6 0	336 10 0	„ Stevens.
Oswestry	5	2	—	13 14 0	15 3 0	28 17 0	„ Parsons.
Oundle	4	2	—	6 1 0	10 8 0	16 9 0	Do.
Ouseburn, Great	6	3	—	3 1 0	11 0 0	19 15 0	„ Barry.
Pateley Bridge	3	2	—	2 7 0	9 11 0	11 18 0	Mr. Spear.
Patrington	5	1	—	—	—	4 11 0	Do.
Penistone	3	1	—	—	—	19 15 0	Dr. Parsons.
Pershore	5	4	—	5 11 0	10 19 0	29 16 0	Mr. Spear.
Peterborough	7	4	—	2 19 0	56 19 0	83 17 0	Dr. Parsons.
Petersfield	4	2	—	2 13 0	6 8 0	9 0 0	„ Stevens.

UNION.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Pickering	3	1	—	—	—	4 8 0	Mr. Power.
Plymouth	1	2	—	62 0 0	70 16 0	132 16 0	Dr. Ballard.
Plympton, St. Mary	5	3	—	8 13 0	9 17 0	27 5 0	Do.
Pocklington	6	4	—	1 19 0	6 10 0	18 13 0	Mr. Spear.
Pontefract	7	6	—	5 14 0	41 14 0	123 4 0	Dr. Barry.
Poplar	4	4	—	32 13 0	133 9 0	311 11 0	„ Stevens.
Portsea Island	1	1	—	—	—	153 2 0	Do.
Reading	1	1	—	—	—	68 5 0	Dr. Stevens.
Reeth	2	1	—	—	—	9 18 0	Mr. Power.
Reigate	4	3	—	7 3 0	23 19 0	44 5 0	Dr. Stevens.
Richmond (Surrey)	3	2	—	10 3 0	31 11 0	41 14 0	Do.
Richmond (Yorks.)	5	3	—	4 5 0	8 18 0	19 3 0	Mr. Power.
Ringwood	1	1	—	—	—	13 16 0	Dr. Stevens.
Ripon	4	2	—	5 8 0	12 5 0	17 13 0	„ Barry.
Romsey	5	2	—	5 10 0	9 18 0	15 8 0	„ Stevens.
Ross	4	—	—	—	—	—	Mr. Spear.
Rothbury	6	—	—	—	—	—	„ Power.
Rotherham	8	4	—	12 0 0	85 5 0	178 9 0	Dr. Barry.
Saddleworth	1	1	—	—	—	47 11 0	Dr. Barry.
Salford	3	3	—	44 1 0	93 6 0	230 8 0	„ Stevens.
Saviour, St.	5	5	—	50 14 0	85 1 0	335 14 0	Do.
Scarborough	5	3	—	6 16 0	55 4 0	71 16 0	Mr. Power.
Sculcoates	6	2	—	80 7 0	92 17 0	173 4 0	Dr. Airy.
Sedbergh	2	1	—	—	—	4 5 0	„ Parsons.
Seisdon	4	4	—	4 12 0	9 10 0	30 0 0	Do.
Selby	5	3	1	1 11 0	28 18 0	41 17 8	Mr. Spear.
Settle	7	5	—	0 18 0	7 12 0	14 12 0	Dr. Barry.
Sheffield	6	6	—	12 5 0	55 12 0	203 14 0	„ Stevens.
Shifnal	4	1	—	—	—	8 3 0	„ Parsons.
Shipston-on-Stour	5	5	—	3 15 0	12 2 0	36 15 0	Mr. Spear.
Shoreditch	3	3	—	33 10 0	90 5 0	213 17 0	Dr. Stevens.
Skipton	8	2	—	12 13 0	30 16 0	43 9 0	„ Barry.
Skirlaugh	5	3	—	4 12 0	6 2 0	15 14 0	Mr. Spear.
Sleaford	7	5	—	4 14 0	18 18 0	55 8 0	Dr. Parsons.
Smallburgh	4	3	—	5 5 0	12 5 0	27 11 0	„ Airy.
Southampton	2	2	—	48 5 0	53 12 0	101 17 0	„ Stevens.
South Molton	9	7	1	0 6 8	9 11 0	37 6 8	„ Ballard.
South Shields	3	1	—	—	—	54 13 0	Mr. Spear.
South Stoneham	5	4	—	9 2 0	21 12 0	58 16 0	Dr. Stevens.
Southwell	7	4	—	1 18 0	9 0 0	22 10 0	„ Blaxall.
Spalding	8	—	—	—	—	—	„ Parsons.
Stafford	4	3	—	9 1 0	38 8 0	60 19 0	Do.
Staines	7	1	—	—	—	9 12 0	Mr. Power.
Stamford	7	3	—	1 0 0	27 6 0	32 6 0	Dr. Parsons.
Stepney	1	1	—	—	—	107 17 0	„ Stevens.
Stockbridge	2	2	—	7 7 0	8 7 0	15 14 0	Do.
Stoke Damerel	2	—	—	—	—	—	„ Ballard.
Stokesley	4	2	—	6 11 0	12 9 0	19 0 0	Mr. Power.
Stoke-upon-Trent	5	1	—	—	—	37 15 0	Dr. Parsons.
Stone	4	—	—	—	—	—	Do.
Stourbridge	7	5	—	12 8 0	45 6 0	125 6 0	Mr. Spear.
Stow-on-the-Wold	2	2	—	8 12 0	8 18 0	17 10 0	Dr. Blaxall.
Strand	1	—	—	—	—	—	„ Stevens.
Stroud	6	3	—	9 0 0	32 2 0	51 17 0	„ Blaxall.
Tadcaster	5	2	—	6 16 0	18 12 0	25 8 0	Dr. Barry.
Tamworth	3	2	—	4 12 0	22 12 0	27 4 0	„ Parsons.
Tavistock	7	2	—	4 4 0	10 15 0	14 19 0	„ Ballard.
Teesdale	7	3	—	3 12 0	13 4 0	26 1 0	Mr. Spear.
Tenbury	2	2	—	6 16 0	8 15 0	15 11 0	Do.
Tetbury	2	1	—	—	—	10 1 0	Dr. Blaxall.
Tewkesbury	4	2	—	6 7 0	16 3 0	22 10 0	Do.
Thirsk	6	2	1	2 17 0	5 19 0	13 0 8	Mr. Power.
Thomas, St.	17	6	1	1 4 0	9 18 0	36 4 4	Dr. Ballard.
Thornbury	4	2	—	0 14 0	12 19 0	13 13 0	„ Blaxall.
Thorne	6	3	—	3 16 0	15 3 0	26 2 0	Mr. Spear.

App. A. No. 2.

Inspection of Public Vaccination.

UNION.	No. of Vaccination Districts in the Union.	No. of respective Vaccination Contractors recommended for Award.		Range of Awards in each Union.		Total Sum awarded in the Union.	Inspector.
		1st Class Award.	2nd Class Award.	Minimum.	Maximum.		
				£ s. d.	£ s. d.	£ s. d.	
Thrapston	5	2	—	9 13 0	11 17 0	21 10 0	Dr. Parsons.
Tiverton	14	2	—	1 6 0	4 4 0	5 10 0	„ Ballard.
Todmorden	2	1	—	—	—	16 0 0	Mr. Spear.
Torrington	5	1	—	—	—	1 19 0	Dr. Ballard.
Totnes	11	1	—	—	—	14 1 0	Do.
Toxteth Park	2	1	—	—	—	89 12 0	„ Stevens.
Upton-on-Severn	5	4	—	1 7 0	13 12 0	24 12 0	Mr. Spear.
Uttoxeter	5	1	—	—	—	5 2 0	Dr. Parsons.
Uxbridge	7	5	—	4 2 0	26 16 0	70 9 0	Mr. Power.
Wallingford	3	2	—	9 5 0	12 1 0	21 6 0	Dr. Stevens.
Walsall	4	3	—	16 2 0	96 18 0	155 0 0	„ Parsons.
Walsingham	6	1	—	—	—	7 5 0	„ Airy.
Wantage	5	1	—	—	—	5 4 0	„ Stevens.
Wellingborough	5	—	1	—	—	5 15 4	„ Parsons.
Wellington (Salop)	3	—	—	—	—	—	Do.
Wells	4	3	—	5 2 0	12 16 0	28 4 0	„ Blaxall.
Wem	4	2	—	5 15 0	5 18 0	11 13 0	„ Parsons.
Weobly	3	2	—	8 12 0	8 14 0	17 6 0	Mr. Spear.
West Bromwich	5	4	—	17 0 0	51 6 0	168 18 0	Dr. Parsons.
Westbury-on-Severn	4	—	—	—	—	—	„ Blaxall.
West Derby	6	4	—	13 15 0	87 12 0	142 19 0	„ Stevens.
Westminster	2	1	—	—	—	24 8 0	Do.
Wetherby	6	3	—	4 0 0	5 9 0	13 17 0	„ Barry.
Wharfedale	3	—	—	—	—	—	Do.
Wheatenhurst	2	1	—	—	—	10 11 0	„ Blaxall.
Whitby	4	1	—	—	—	16 14 0	„ Power.
Whitchurch (Hants)	3	2	—	4 7 0	6 18 0	11 5 0	„ Stevens.
Whitchurch (Salop)	4	3	—	0 15 0	6 11 0	9 9 0	„ Parsons.
Whitechapel	1	1	—	—	—	150 17 0	„ Stevens.
Wight, Isle of	9	7	—	2 3 0	22 12 0	83 1 0	Do.
Winchcomb	2	—	—	—	—	—	„ Blaxall.
Winchester, New	4	4	—	5 0 0	34 2 0	57 7 0	„ Stevens.
Windsor	3	2	—	23 15 0	30 10 0	54 5 0	Do.
Winslow	3	1	—	—	—	9 15 0	„ Thorne.
Wokingham	4	3	—	6 16 0	16 17 0	34 6 0	„ Stevens.
Wolstanton and Burslem.	3	2	—	36 10 0	57 2 0	93 12 0	„ Parsons.
Wolverhampton	5	2	—	45 9 0	59 9 0	104 18 0	Do.
Worcester	1	1	—	—	—	45 0 0	Mr. Spear.
Worksop	7	3	—	2 9 0	25 19 0	35 3 0	Dr. Blaxall.
Wortley	3	1	—	—	—	22 1 0	„ Parsons.
Wycombe	12	8	—	3 7 0	15 6 0	66 4 0	„ Thorne.
Yarmouth, Great	1	1	—	—	—	52 11 0	Dr. Airy.
York	6	5	—	1 13 0	84 10 0	98 17 0	Mr. Spear.
Total	1,350	737	14	—	—	14,264 16 8	

No. 3.

Statistics of the National Vaccine Establishment and Educational Vaccination Stations.

Ia.—Staff at end of 1882.

N.B.—The Stations named in *italics* are Educational Vaccination Stations authorised by the Local Government Board.

—	Name.	Vaccination Stations.	Days and Hours of Attendance.
Vaccinators supplying lymph for the public service, & salaried from the Parliamentary grant.	1. Dr. R. Cory	*Surrey Chapel*	Tues., Thurs.; 2.
	2. Mr. W. E. G. Pearse	*Tottenham Court Chapel.*	Mon., Wednes.; 1.
Parochial and other Vaccinators not salaried from the Parliamentary grant, but contributing lymph at a fixed rate of payment.	1. Mr. Ellis S. Guest	*Manchester*	Monday; 2.
	2–6. Dr. Edmund Robinson.	*Birmingham*	Monday, Tuesday } 11. Wednesday; 2. Thursday; 11.
	7. Mr. Roger Parker	*Liverpool*	Thursday; 2.30.
	8. Mr. E. L. Webb	*Pimlico*	Thursday; 10.
	9. Mr. J. Hawthorn	*Newcastle-on-Tyne.*	Wednesday; 3.
	10. Mr. W. E. G. Pearse	*Westminster*	Tuesday; 2.
	11–12. Mr. W. A. Sumner	*Marylebone*	Tuesday; 2. Wednesday; 10.
	13. Mr. C. T. Blackman	*Whitechapel*	Wednesday; 11.
	14. Mr. Frederick Holmes	*Leeds*	Tuesday; 2.30.
	15. Dr. Edward Lynes	Coventry	Tuesday; 12.
	16. Dr. Hugh Thomson	*Glasgow*	Monday; 12.
	17. Mr. Robert W. Dunn	*Strand*	Thursday; 11.
	18. Mr. Matthew Brownfield	Bromley, Middlesex.	Tuesday; 3.
	19. Mr. W. Skinner	*Sheffield*	Tuesday; 3.
	20. Dr. A. C. Clarke	Salford	Thursday; 2.
	21. Mr. N. Miskin	Waterloo	Tuesday; 2.
	22. Mr. T. F. Morrish	Toxteth Park	Tuesday; 11.
	23. Dr. J. O. Affleck	*Edinburgh*	Wednes., Sat.; 12.
	24. Dr. R. Cory	*St. Thomas's Hosp.*	Wednesday; 11.30.
	25. Dr. D. C. McVail	*Glasgow West*	Monday; 1.
Teachers of Vaccination not supplying lymph	Dr. W. Husband	*Edinburgh*	Wednes., Sat.; 12.
	Dr. R. D. Tannahill	*Glasgow*	Mond., Thurs.; 12.
	Mr. H. Lawrence	*Bristol*	Wednesday; 10.
	Mr. J. Gittins	*Horsleydown*	Monday; 2.
	Mr. William A. Budd	*Exeter*	Thursday; 3.

App. A. No. 3.

National Vaccine Establishment.

I*b*.—Animal Vaccination.

The Animal Vaccine Station is at 95, Lamb's Conduit Street, where Dr. R. Cory and Mr. S. F. Murphy attend for the Vaccination of Children on Tuesdays and Thursdays, from 10.30 a.m. to 12 noon.

II.—Sources and Amount of Lymph Supply in 1882.

N.B.—The Stations named in *italics* are Educational Vaccination Stations authorised by the Local Government Board.

—	Vaccination Stations.	Number of Vaccinations performed at the Stations respectively.		Number of Charges of Lymph supplied from the Stations respectively.	
		Primary.	Re-vaccinations.	Charged ivory Points.	Charged Tubes each estimated as equal to 10 ivory Points.
Vaccinators salaried from the Parliamentary grant.	1. *Surrey Chapel*	362	38	5,089	—
	2. *Tottenham Court Chapel.*	944	50	160*	737
	Total -	1,306	88	5,249	737
Parochial and other Vaccinators not salaried from the Parliamentary grant, but contributing lymph at a fixed rate of payment.	1. *Manchester*† -				
	2–6. *Birmingham* -	5,227	620	—	3,596
	7. *Liverpool* -	1,443	1	—	847
	8. *Pimlico* - -	482	84	—	492
	9. *Newcastle-on-Tyne.*	626	171	—	781
	10. *Westminster* -	833	95	—	951
	11–12. *Marylebone* -	1,646	147	—	141
	13. *Whitechapel* -	1,719	33	—	292
	14. *Leeds* - -	1,056	—	—	278
	15. Coventry -	984	4	—	1,414
	16. *Glasgow* - -	906	1	—	282
	17. *Strand* - -	459	12	—	—
	18. Bromley - -	1,489	32	—	14
	19. *Sheffield* - -	1,146	—	—	331
	20. Salford - -	694	4	—	572
	21. Waterloo -	684	14	—	1,400
	22. Toxteth Park -	1,536	4	—	1,634
	23. *Edinburgh* -	1,187	7	—	35
	24. *St. Thomas's Hospital.*§	228	8	—	64
	25. *Glasgow West*	740	—	—	—
	Total -	23,085	1,237	—	13,124
	Grand Total -	24,391	1,325	5,249	13,861

* This number includes 40 charged glasses, each estimated as equal to four charged ivory points.

† No information received from this station.

§ Information for five months only received from this station.

II.—Sources and Amount of Lymph, &c.—*continued.*

During the year additional supplies (to the extent of 8,056 charged tubes) were obtained from the following gentlemen:—

Mr. C. C. Claremont, Hampstead Road.
Mr. W. Kempster, Battersea East.
Mr. G. A. H. Hepworth, Gloucester.
Mr. J. Oakman, Battersea West.
Mr. W. Arthur, Kennington.
Mr. H. May, Aston.
Mr. H. W. Newton, Newcastle-on-Tyne.
Mr. W. H. W. Wilkinson, Liverpool Road.
Mr. J. P. Purvis, Greenwich.
Mr. J. W. Kay, St. George's-in-the-East.
Dr. N. E. Roberts, Toxteth Park.
Dr. T. N. Orchard, Pendleton.
Mr. T. M. Johnson, Salford.

III.—Distribution of Human Lymph, 1882.

Number of applications:	
From Medical Practitioners in England and Wales	8,114
„ „ „ Scotland	247
„ the Army	439
„ the Navy and from the Emigration Department	105
„ India and the Colonies	157
„ Diplomatic and other Foreign Services	80
Total	9,142
Supplies sent out:—	
Charged ivory points	5,007
„ squares of glass	40
„ capillary tubes	21,483

IV. Calf-Lymph, 1882.

Number of applications	589
Amount received:—	
Charged points	3,655
„ tubes	471
Supplies sent out:—	
Charged ivory points	2,872
„ capillary tubes	270

No. 4.

ABSTRACT of MEDICAL INSPECTIONS made in 1882 with regard, generally, to the INCIDENCE of DISEASE on particular places, and to consequent Questions concerning the LOCAL SANITARY ADMINISTRATION.

Area of Inquiry and Name of Inspector.	Ground of Inquiry.	Jurisdiction concerned.	Chief Facts reported by Inspector.
1. Ampthill - (Bedfordshire.) *Dr. Thorne.*	Information from Medical Officer of Health.	Ampthill guardians and rural sanitary authority.	Under the emergency of an outbreak of small-pox attacking the inmates of the workhouse and the residents in Ampthill town, a portion of the workhouse was used as a temporary hospital for the isolation of those attacked. All further spread of infection to the inmates was stayed by re-vaccination. Apart from one unvaccinated infant no fatal case occurred under the age of puberty, and out of a total of 107 attacks in the district no person protected by re-vaccination was affected.
2. Andover - - (Hants.) Population, 10,047. *Dr. Blaxall.*	Unsatisfactory character of the reports of the Medical Officer of Health.	Andover rural sanitary authority.	Certain dwellings in an extreme state of dilapidation. District undrained. Midden privies a source of nuisance and dangerous to health. Water supply abundant in the valleys, but very scarce on the hills; wells sunk in a filth-sodden soil, exposing the water to dangerous pollution. Frequent prevalence of nuisance around houses particularly from improper storage of excrement and refuse, and from pools of house-slops. Failure on the part of the Medical Officer of Health and the Inspector of Nuisances to comprehend the nature and scope of the duties required of them.
3. Ashton-under-Lyne - (Lancashire.) Population, 37,040. *Dr. Ballard.*	Local request - -	Ashton-under-Lyne town council.	Crowding of houses on area with insufficient space about them. Abundant nuisances found. Accumulations of excrement and house refuse and bad construction of privies. In some parts neglect of proper making of roadways. High general death-rate, and especially high death-rate among children and from preventable causes.
4. Bangor and Bethesda. (Carnarvonshire.) *Dr. Barry.*	Local information -	Bangor urban, Bethesda urban, and Bangor rural sanitary authorities.	Extensive outbreak of enteric fever occurring simultaneously over the area supplied by the Bangor waterworks, and limited to the consumers of the water obtained therefrom. Direct communication ascertained to exist by means of a drain between a house occupied by persons suffering from enteric fever and the source of the water supply, and thence, in consequence of imperfection in filtering arrangements, directly to the consumers of the water. The subsequent spread of the disease promoted by the connection established between the houses and ill ventilated sewers, and the accumulation of filth in proximity to houses. Want felt of hospital accommodation for infectious diseases, and of a disinfecting apparatus.
5. Bedwelty Registration District (*part.*) (Monmouthshire.) Population, 34,716. *Mr. Spear.*	Registrar General's Returns, and reports of Medical Officers of Health.	Abertillery urban sanitary authority.	*Abertillery Urban Sanitary District.* —(Pop. 6,000.)—Localised prevalence of enteric fever in 1882, associated apparently with the use of a certain water supply. Extensive prevalence of scarlatina in 1881 and 1882; its wide diffusion supervening upon the existence for some months of sporadic cases. No means for dealing effectively with epidemic disease. No proper system of sewerage; parts of district not provided with wholesome water supply. Prevalence of privy and drain nuisances.

Area of Inquiry and Name of Inspector.	Ground of Inquiry.	Jurisdiction concerned.	Chief Facts reported by Inspector.
5. Bedwelty Registration District (*part*)—*cont.*	Registrar General's Returns, and reports of Medical Officers of Health.	Ebbw Vale urban sanitary authority.	*Ebbw Vale Urban District.*—(Pop. 15,519.)—An almost house-to-house prevalence of enteric fever in small detached hamlet in 1881, ascribed by Medical Officer of Health to excremental pollution of atmosphere from privy and other nuisances. Public water supply had, however, at time failed, and inhabitants had largely resorted to questionable sources. Notable fact also (which, however, received no explanation) that working lads (employed in a colliery) of families invaded, unusually often first to be attacked. Extensive prevalence of scarlatina, the disease spreading from one hamlet to another, in years 1881–82. No provision for isolation. Part of district not supplied from public water mains; and supply then improper. Prevalence of sewage nuisances. Byelaws obsolete.
		Bedwelty rural sanitary authority.	*Bedwelty Rural District.*—(Pop. 13,197.)—Parts of this district urban in character, others rural. In former, extensive prevalence of scarlatina throughout 1882; in one of the hamlets of the latter, prevalence of diphtheria. Localised prevalence of typhoid in 1881. Large proportion of the population very poor; very many houses quite unfit for habitation; no means of sewerage; many houses unprovided with privy accommodation; no paving, &c., of surface about dwellings. Water supply very deficient in quantity and, when obtained, generally polluted. No means of isolation.
6. Brierley Hill (Worcestershire.) Population, 11,603. *Dr. Parsons.*	Local complaint	Brierley Hill local board.	Private wells in use in certain parts of the town in dangerous proximity to privies, dumb-wells, pigstyes, and other sources of pollution. The wells are sunk through clay into a water-bearing bed of loose rock, and it seems to be the practice to puddle the upper part of the well to exclude surface soakings, but the outcrop of the water-bearing bed being in a town, the water appears to carry down impurities from the gathering ground. Public water service furnished by South Staffordshire Waterworks Company, but not extended to all parts of town, impure supplies consequently in use. Privies with foul open cesspits. Pig-keeping nuisances. Want of proper sewerage in outlying parts of town.
7. Clapham. (Surrey.) *Dr. Parsons.*	Enteric fever. Local complaint.	Wandsworth District Board of Works.	Outbreak of typhoid fever in June and July 1882, of limited extent, occurring for the most part in houses of the best class, and attacking (with one exception capable of being otherwise accounted for) only persons getting milk from a particular dealer at Clapham, and especially large milk drinkers. The milk used by the patients had come from two farms near Axminster, no fever having occurred among persons using milk from the dealer's own cows. The mode in which the milk became infected was not ascertained but there had been cases of fever some months before in the place from which it came, and the well water at both farms was found on analysis to be contaminated with sewage products.
8. Coggeshall and neighbourhood. (Essex.) *Dr. Airy.*	Information from the Medical Officer of Health as to epidemic of diphtheria.	Braintree rural sanitary authority.	Serious epidemic of diphtheria, especially among children attending one particular school. Origin uncertain. Spread chiefly by personal communication. Drainage into watercourses. Water supply, partly by pipes, partly by carts, from good spring, imperfectly secured from pollution. No public means of isolation.

Area of Inquiry and Name of Inspector.	Ground of Inquiry.	Jurisdiction concerned.	Chief Facts reported by Inspector.
9. Dartford Registration District. (Kent.) Population 22,439. *Mr. Spear.*	Registrar General's Returns.	Dartford local board -	*Dartford Urban Sanitary District.*—(Pop. 10,159).—Prevalence of enteric fever, localised to low-lying portion of town, during 1881 and part of 1882. In parts invaded, subsoil water stands 3 or 4 feet only from the surface; and into this water-level wells and cesspools are sunk indifferently. At time of fever outbreak sewers were being constructed, pumping operations being needed to lower subsoil water; wells and cesspools were often pumped dry. Wells, on again receiving soakage, of necessity much polluted. 40 per cent. of houses in this low-lying district supplied from local wells, remainder from Kent Water Company's mains (everywhere available); in former, over 80 per cent. of fever attacks occurred. In addition to defects of water supply, cesspool and other nuisances very common.
		Dartford rural sanitary authority.	*Part of Dartford Rural Sanitary District.*—(Pop. 11,280.)—Localised and recurring outbreaks of diphtheria. Initial cases occurring in houses where gross sanitary defects existed, and in spots where diphtheria had previously been observed; disease then apparently spreading through schools. Parts of this district rapidly extending, yet no bye-laws. Houses being built without any regard to sanitary requirements. Very little inspection for sanitary purposes.
10. Folkestone - - (Kent.) Population, 18,717. *Dr. Parsons.*	Diphtheria. Regis.-General's Returns.	Folkestone town council acting as improvement commissioners.	Epidemic of diphtheria in winter and spring of 1881-2, chiefly affecting certain suburbs inhabited by the working classes. Disease propagated in part by personal intercommunication, and associated in most instances with conditions facilitating the entry of sewer-air into houses. Insufficient ventilation and flushing of sewers and drains. Polluted shallow wells. Hospital accommodation not sufficiently made use of.
11. Galgate - - (Lancashire.) Population, 743. *Dr. Barry.*	Request of local authority.	Lancaster rural sanitary authority.	Outbreak of enteric fever in August, 1882, among persons drinking water obtained from a well contaminated with excremental matter. Water supply of village insufficient; wells of doubtful purity resorted to. Midden privies a source of nuisance and of grave injury to health. No means of isolation or efficient disinfection.
12. Guildford, Dorking, and neighbourhood. (Surrey.) *Mr. Power.*	Outbreak of diarrhœa. Report by Medical Officer of Health of Guildford rural sanitary district.	Guildford, Dorking, and Hambledon rural sanitary authorities.	Sudden epidemic of diarrhœa extending over many country parishes, attacking adults and children, but not babies. Absence among invaded houses of community of sanitary conditions that would suffice to account for the observed distribution of the malady. Detailed inquiry (embracing above two dozen articles of food) into the food circumstances of invaded families, upon the whole negative.
13. Helston, Redruth, and Falmouth Unions. (Cornwall.) *Dr. Ballard.*	As to Medical Officer of Health arrangements.	Helston rural sanitary authority.	*Helston Rural Sanitary District* (Pop. 20,249).—General inefficiency of the arrangements under which the District Medical Officers had hitherto acted as Medical Officers of Health, and of sanitary administration by the authority. Serious nuisances from accumulations of filth, absence or inefficiency of drainage and want of due privy accommodation throughout the district. In many places deficiency of water supply, or a supply of very questionable wholesomeness. Great prevalence of phthisis.

Area of Inquiry and Name of Inspector.	Ground of Inquiry.	Jurisdiction concerned.	Chief Facts reported by Inspector.
13. Helston, Redruth, and Falmouth Unions.—*cont.*	As to Medical Officer of Health arrangements.	Helston town council	*Helston Urban Sanitary District.* (Pop. 3,432.)—Very negligent sanitary administration. Excrement nuisances and nuisances from want of proper drainage, abounding everywhere. Many houses without privy accommodation. No supervision of common lodging-houses.
		Redruth rural sanitary authority.	*Redruth Rural Sanitary District.* (Pop. 18,938).—General inefficiency of sanitary administration and of the arrangements under which the District Medical Officers fill the posts of Medical Officers of Health. Little or no improvement (except in the Illogan district) in the sanitary condition of the district since Dr. Blaxall's inspection in 1877.
		Redruth local board -	*Redruth Urban Sanitary District.* (Pop. 9,335).—Inefficient sanitary administration and medical supervision. Sanitary condition of district much as it was at the time of Dr. Blaxall's inspection in 1877.
		Camborne local board.	*Camborne Urban Sanitary District.* (Pop. 13,601).—General efficiency of Medical Officer of Health and sanitary improvement of district.
		Phillack local board -	*Phillack Urban Sanitary District.* (Pop. 3,643.)—Inefficient sanitary administration generally. Sanitary condition of district much the same as when reported on by Dr. Blaxall in 1877. District very filthy from excrement and drainage nuisances, the removal of which the authority does not duly enforce, and the recurrence of which it does not endeavour to prevent.
		Hayle local board -	*Hayle Urban Sanitary District.* (Pop. 1,089).—Inadequate apprehension of his functions by the Medical Officer of Health.
		Falmouth rural sanitary authority.	*Falmouth Rural Sanitary District.* (Pop. 9,960).—Medical Officer of Health doing his best, and on the whole satisfactorily. Considerable improvement in district since passing of Public Health Act.
		Falmouth town council.	*Falmouth Municipal Borough.* (Pop. 5,973).—Medical Officer of Health doing his work satisfactorily.
		Falmouth (parish) local board.	*Falmouth (Parish) Urban Sanitary District.* (Pop. 6,158).—Medical Officer of Health doing his work satisfactorily.
		Penryn town council.	*Penryn Urban Sanitary District.* (Pop. 3,466.)—Medical Officer of Health doing his best, and on the whole satisfactorily. Much improvement needed in the town, especially in respect of privies and sewer ventilation.
14. Hindley - - (Lancashire.) Population, 14,669. *Mr. Spear.*	Inadequacy of reports of Medical Officer of Health.	Hindley urban sanitary authority.	Omissions of reporting on part of Medical Officer of Health consequent upon neglect of the active duties of the office. Absence of any means for dealing with spread of infectious diseases. Many "filth" nuisances, arising from want of due sanitary supervision; a certain number of houses quite unfit for habitation. Byelaws (made in 1876) not well adapted to special wants of district; and houses now being built without sufficient regard to sanitary requirements.

Area of Inquiry and Name of Inspector.	Ground of Inquiry.	Jurisdiction concerned.	Chief Facts reported by Inspector.
15. Holbeach Rural Sanitary District. (Lincolnshire.) Population, 9,158. *Dr. Parsons.*	Communication from Holbeach Guardians.	Holbeach rural sanitary authority.	*Gedney Drove End & Dawsmere.*—Diphtheria prevalent February to October 1882: origin not ascertained; propagated, apparently, chiefly by personal intercourse. *Whaplode Drove.*—Enteric fever endemic during past two years. Scarlet fever prevalent in winter of 1881–2. A flat fen district. House drainage defective, into ditches or cesspools. Ill-contrived and offensive vault-privies in general use. Water supply from shallow wells and underground rain-water cisterns; some houses unprovided with any. Both wells and cisterns often liable to be fouled by surface impurities, and wells also by soakage from neighbouring cesspools and privy-vaults. Older cottages ill-ventilated and overcrowded.
16 Hull and neighbourhood. (Yorkshire.) *Dr. Airy.*	Epidemic of scarlet fever shown in Registrar General's Returns, and memorial of rate-payers.	Kingston-upon-Hull town council as urban sanitary authority.	Severe epidemic of scarlet fever, which gained head in the absence of systematic early notification to the sanitary authority. Subsequent outbreak of small-pox. Soil water-logged, house foundations damp. Sewerage tide-locked. [Pumping station proposed]. Water supply from good chalk well, partly passed through open reservoirs. Privy-emptying irregular. Nuisance from night-soil depôt. Variety of trade-nuisances. [Refuse-destructor proposed.] Isolation hospital inadequate to needs of borough.
		Kingston-upon-Hull town council as port sanitary authority.	Regulations for medical inspection of vessels arriving in port imperfect. Importance of this in respect of emigrants.
		Sculcoates rural sanitary authority.	Some extension of scarlet fever from Hull to surrounding villages. Excrement removal dealt with by the sanitary authority. No hospital for isolation.
17. Kingsbridge (Devon.) Population, 16,934. *Dr. Ballard.*	As to Medical Officer of Health arrangements.	Kingsbridge rural sanitary authority.	Inefficient sanitary administration and inefficiency of medical supervision. Abundance of obvious nuisances and unwholesome conditions nearly everywhere. Deficiency of water supply at some villages.
18. King's Lynn and neighbourhood. (Norfolk.) *Dr. Airy.*	Outbreak of diphtheria. Information from the Medical Officer of Health.	King's Lynn town council.	Severe outbreak of diphtheria extending over all quarters of the town and to neighbouring villages. Origin uncertain. Little evidence of dependence on personal communication. Suggestion of dependence on wind conveyance. Water supply from river liable to pollution. Sewers unventilated and tide-locked. Privies discharging into "decomposing cisterns," with overflow to sewers.
19. Maryport (Cumberland.) Population, 8,126. *Mr. Spear.*	"Fever." Registrar-General's returns.	Maryport Town and Harbour Commissioners.	Outbreak of "fever." Disease found to be true typhus; the cases seen being the last of an unbroken series that had extended over a period of nine months. No measures worth recording had been taken, although the disease had prevailed amongst squalid and overcrowded habitations. In the greater part of the town the houses are built on insufficient space, and are huddled together; overcrowding is common; the ventilation of rooms is frequently very defective, and sanitary supervision for the purposes of securing cleanliness is almost entirely absent. No system of sewers in the town; many houses without privy accommodation.
20. Millbrook (Cornwall.) Population, 1,500. *Dr. Ballard.*	Renewed outbreak of enteric fever.	St. Germans rural sanitary authority.	Renewed outbreak of enteric fever. Neglect of the sanitary authority to carry out fully or efficiently the recommendations of the Board made after an inspection on account of an epidemic of fever in 1880.
21. New Shoreham (Sussex.) Population, 3,505. *Dr. Thorne.*	Reported prevalence of fever.	New Shoreham urban sanitary authority.	Prevalence of enteric fever. Water drawn from polluted wells, although an excellent public service, is available. House drains in unbroken communication with an ill-ventilated system of public sewers. Water-closets a nuisance owing to absence of proper means of flushing. Bye-laws defective.

Area of Inquiry and Name of Inspector.	Ground of Inquiry.	Jurisdiction concerned.	Chief Facts reported by Inspector.
22. Norwood - - (Middlesex.) *Mr. Power.*	Enteric fever. Local request.	Uxbridge rural sanitary authority.	Sudden dissemination of enteric fever among the inhabitants of a terrace of 30 dwellings having water service from half-a-dozen wells. Limitation of the fever to 14 dwellings at the upper part of the terrace; which dwellings, though nominally getting water from three separate sources, were in the end found to have been served by one and the same well. (*See* page 84.)
23. Pirbright Parish - (Surrey.) *Mr. Power.*	Diphtheria. Request of sanitary authority.	Guildford rural sanitary authority.	Widespread diphtheria in a rural parish mainly affecting school children. Repeated closure, on each occasion for several weeks, of the National School on account of diphtheria among the children. Diminution or cessation of diphtheria in the parish during each interval of school-closure, with prompt reappearance of the disease among school children each time that the school recommenced operations. (*See* page 52.)
24. Plymouth - - (Devon.) Population, 73,794. *Dr. Blaxall.*	To ascertain action taken to carry out the recommendations appended to Dr. Blaxall's Report of 1879.	Plymouth town council.	Improvements effected in respect of dwellings, sewerage, water-supply, refuse removal, street cleansing, and slaughter-houses. No action taken to improve the Infectious Hospital, nor to secure systematic supervision and inspection of the district by the Medical Officer of Health, and the Inspector of Nuisances. Sewers still insufficiently ventilated and unprovided with means of flushing. Outdoor closets in a filthy condition.
25. Plympton - - (Devon.) Population, 22,729. *Dr. Ballard.*	As to Medical Officer of Health arrangements.	Plympton St. Mary rural sanitary authority.	With some exceptions, inefficiency of medical supervision. Great neglect of ordinary duties by the Inspector of Nuisances. In many villages nuisances from accumulation of filth, insufficient drainage, deficiency of privy accommodation and unwholesomeness of labourers' dwellings. Insufficient quantity and obvious pollution of some water supplies.
26. Potton - - (Bedfordshire.) Population, 2,640. *Dr. Parsons.*	Local information -	Biggleswade rural sanitary authority, and Potton school board.	Epidemic of scarlet-fever, apparently propagated chiefly by the attendance at schools of children in an infectious state. On closing of the schools the scarlet fever abated. Sanitary condition good.
27. Rochdale - - Population, 68,866. *Dr. Thorne.*	Local complaints -	Rochdale town council	During the course of an extensive epidemic of small-pox which attacked in all some 650 houses within the borough in 12 months, a disused workhouse was taken over by the Corporation for the isolation of persons attacked. Following upon this use of the building there had been a considerable outbreak of small-pox upon the population living in its immediate neighbourhood. So many sources of uncontrolled personal infection had however been in operation in the neighbourhood of the hospital, both owing to grave neglect in the administration of the hospital itself and otherwise, that it became impossible to judge whether any, and if so how much, of the spread complained of had been due to aerial influence.
28. Rothwell - - (Yorkshire.) Population, 5,103. *Dr. Parsons.*	Returns of Registrar-General and report of Medical Officer of Health.	Rothwell local board	Scarlet fever prevalent in 1882, propagated by free intercourse between sick and healthy, among a rough ignorant mining population. Care had been taken to exclude from school the children of infected households. It had not been considered necessary to close the schools on account of the epidemic; but the closing for a week during the usual Whitsuntide holidays was followed by an extension of the disease, attributed to freer inter-communication between members of different families when not at school.

Area of Inquiry and Name of Inspector.	Ground of Inquiry.	Jurisdiction concerned.	Chief Facts reported by Inspector.
29. St. Helens - (Lancashire.) Population, 57,234. *Mr. Spear.*	Fever. Registrar General's returns.	St. Helens town council.	Continued prevalence of enteric fever. Many parts of the town ill-built, with cul-de-sac back lanes, &c., and much enclosed house yards. Almost invariable existence in such parts of serious sewage and privy nuisances; and incidence upon them of fever. Public sewerage system defective.
30. St. Pancras, West London, &c. *Mr. Power.*	Scarlatina outbreaks. Request of St. Pancras Vestry.	St. Pancras, St. Giles, St. Martin, St. George's, Camberwell vestries, and Farnham rural sanitary authority.	Simultaneous outbreak in several different quarters of London of scarlatina among customers of separate retail milk-sellers supplied, wholly or in part, with milk from a particular farm in Surrey. Absence of evidence that the milk at the farm had become infected in any of the commonly believed ways that require a human subject as the source of infection. Considerations tending to suspicion of some condition special to the cow as competent for the results observed. Suggestions for actual experiment. (*See* page 63.)
31. Sale - - - (Cheshire.) Population, 7,915. *Dr. Parsons.*	Diphtheria. Registrar General's returns.	Sale local board - -	Endemic prevalence of diphtheria in 1880–82. Origin and mode of propagation uncertain. Sanitary defects existed at many of the houses attacked, especially communications between drains and interior of houses, and wet leaky privies in undue proximity to them.
32. Sherborne - - (Dorsetshire.) *Dr. Blaxall.*	Enteric fever. Request of sanitary authority.	Sherborne local board	Outbreak of enteric fever confined to three houses which had a water supply separate from the town. Fever due to water specifically contaminated by sewer air through direct communication existing between water mains, closets, and sewer. Dr. Blaxall attributed a widespread epidemic of enteric fever at Sherborne in 1873 to a similar cause. Remedial action was then adopted with the result that enteric fever has since almost disappeared from Sherborne, whereas previously mortality from enteric fever was of annual occurrence. (*See* page 92.)
33. Southborough - (Kent.) Population 3,870. *Mr. Spear.*	Enteric fever. Local information.	Southborough urban sanitary authority.	*Outbreak of Enteric Fever.*—From June 1st to September 1st, 24 houses invaded, all, with one exception, in a circumscribed locality. Public sewerage of district fairly satisfactory, except that the system necessitates for most houses long lengths of private drains. The latter constructed without proper supervision; those examined in the infected district admitted of escape of contents into surrounding soil, and often of discharge of gas into houses. Water entirely from local wells; these often situated in close proximity to drains. "Pan" closets in use, being insufficiently flushed, often causing nuisance.
34. Sutton-in-Ashfield - (Nottinghamshire.) Population, 8,523. *Dr. Parsons.*	Diphtheria and scarlet fever. Reports of Medical Officer of Health.	Sutton - in - Ashfield local board.	Simultaneous prevalence of diphtheria and scarlet fever, not specially affecting children attending school. Water supply from wells exposed to pollution. Old sewers and house drains of imperfect construction, permitting leakage and deposit of sediment. Parts of district unsewered, with consequent nuisance from cesspools and deposit of foul matters on surface of ground. Midden-privies of defective construction. No hospital accommodation.

Area of Inquiry and Name of Inspector.	Ground of Inquiry.	Jurisdiction concerned.	Chief Facts reported by Inspector.
35. Taunton - - (Somerset.) Population, 16,614. *Dr. Blaxall.*	Registrar-General's returns showing notable mortality from diphtheria.	Taunton town council	General prevalence of sore throat, long continued presence of diphtheria, and high mortality. Evidence points to the disease having been introduced from without, and subsequently spread in the town by personal intercommunication between infected and healthy persons. Spread favoured by insanitary conditions. Inefficient action taken to prevent the spread of the disease. Concurrent presence of scarlatina and enteric fever. Behaviour of diphtheria similar to that of measles and scarlatina, and unlike that of enteric fever. Successful working of the infectious hospital. Decrease in mortality from enteric fever attributed to improvement effected in the water supply and means of excrement removal. Condition of sewers and house drains eminently unsatisfactory. Water supply from extraneous sources insufficient. Local wells exposed to dangerous pollution. Closets unprovided with means for flushing. Excreta nuisance frequent. Inefficient system of refuse-removal. Good infectious hospital provision.
36. Taunton - - (Villages of Bishop's Lydiard, Bishop's Hull, and Bathpool.) (Somerset.) *Dr. Blaxall.*	Reported prevalence of diphtheria.	Taunton rural sanitary authority.	Diphtheria introduced into three villages, and subsequently spread by personal intercommunication between infected and healthy persons. Spread favoured by schools. Diphtheria in one village confined to schoolgoers. Prevalence of excrement nuisances. Water supply exposed to dangerous pollution. Duties of Inspector of Nuisances inefficiently carried out.
37. Tempsford - - (Bedfordshire.) Population, 535. *Dr. Parsons.*	Diphtheria. Registrar General's returns.	Biggleswade rural sanitary authority.	Diphtheria prevalent since November, 1881. The first three cases, who were attacked nearly simultaneously, were children of different families, but all attended the village school, as also did the great majority of those who subsequently suffered. Decline of the epidemic from the time that isolation in hospital was generally carried out. Situation of the village somewhat low and damp; soil gravel on clay, cottages with very thin walls and commonly damp.
38. Torpoint - - (Cornwall.) *Dr. Ballard.*	Delay of authority in procuring proper water supply.	St. Germans rural sanitary authority.	The necessity of including a supply of water to Antony and Wilcom in the Torpoint water scheme and the adaptability of the Polsco scheme to these purposes.
39. Ulverston - - (Lancashire.) Population, 10,008. *Mr. Spear.*	Enteric fever. Local information.	Ulverston urban sanitary authority.	Prevalence of enteric fever in autumn of 1881; similar but less considerable prevalences in previous years. Water mains throughout district, but water often so turbid that inhabitants resort to local supplies. This from certain causes had happened especially at the time of the fever outbreak; and the disease was mainly confined to the users of a certain one of these local supplies. Sewer ventilation insufficient. Extension of water-closet system advisable.
40. Weston-super-Mare (Somerset.) Population, 12,884. *Dr. Blaxall.*	Local complaint -	Weston-super-Mare local board.	Two families living widely apart attacked with enteric fever within 15 days of leaving the same lodging-house at Weston-super-Mare. Evidence pointed to the disease having been contracted at the lodgings. The house-drain was in a most unwholesome condition, and the water supply which was derived from a local well was contaminated. The town possesses a good water-supply from extraneous sources. Local wells exposed to dangerous pollution. Street cleansing well carried out. Infectious diseases hospital provided. Many of the lodging-houses in an unsatisfactory condition, being exposed to the entry of sewer-air into them, and deriving their water-supply from local wells. The out-door closets are unprovided with means for flushing, and the soil-pipes of in-door closets inefficiently ventilated.

No. 5.

App. A. No. 5.

On the Operations of the Animal Vaccine Establishment; by Shirley F. Murphy.

On the Operations of the Animal Vaccine Establishment; by Mr. Murphy.

The last report gave an account of the earlier operations of the establishment in the temporary premises situated in the stoneyard of the workhouse of St. Mary Abbott, Kensington, where arrangements were made for the cultivation of calf-lymph and its supply to the National Vaccine Establishment, but where there was no opportunity for the vaccination of children direct from the calf.

The present report, in continuation of the last, refers to a period beginning with the opening of the permanent premises in Lamb's Conduit Street in the early part of April 1882, since which date, in addition to the cultivation of calf-lymph, a number of persons have been vaccinated at the station.

Permanent premises in Lamb's Conduit Street.

The premises consisted originally of some newly erected stables in the rear of houses in Lamb's Conduit Street. These were altered so as to meet the requirements of the establishment.

The ground floor of the house 95, Lamb's Conduit Street was converted into an entrance hall, giving access to a waiting-room measuring 32 × 29 feet. The waiting-room opens into another room measuring 25 × 30 feet, and divided into two parts by a screen, on either side of which the vaccination of children and calves are performed. On the side of this operating-room further from the waiting-room is a passage leading to a furnace-room, a store room, and three stables for calves.

Each stable measures on on average 15½ feet by 9½ feet, and is fitted with four stalls; each calf, therefore, has a floor space of 36·7 feet.

The floor of the whole institution is made of concrete, and in the stables has a fall to a channel which opens into a trapped drain. The walls are of brick and covered with cement to about four feet from the floor. The divisions between the stalls are made of slate, the troughs, &c. of iron.

Each room and stable is heated with hot-water pipes, so arranged that the heat in any one can be maintained independently of the others.

Adjoining these rooms is a yard containing an isolation stable, to which can be removed any calf which it may be desirable to separate from the others, waterclosets for the convenience of the public, a manure bin, and an enclosed receptacle for boiling milk.

The floor above is devoted to a resident caretaker and his family, one room being retained for microscopic purposes.

Days for vaccination of children.

On April 11, 1882 the station was opened for the vaccination of children and adults, vaccinations taking place every Tuesday and Thursday from 10.30 a.m. to 12 noon.

The need for the lymph-supply to fall upon these days has led to the days of vaccination of calves being appointed as follows :—

Days for vaccination of calves.

A calf is vaccinated on Saturday with lymph stored in tubes. This calf supplies lymph on the following Thursday for—

a. The direct vaccination of children at the station;

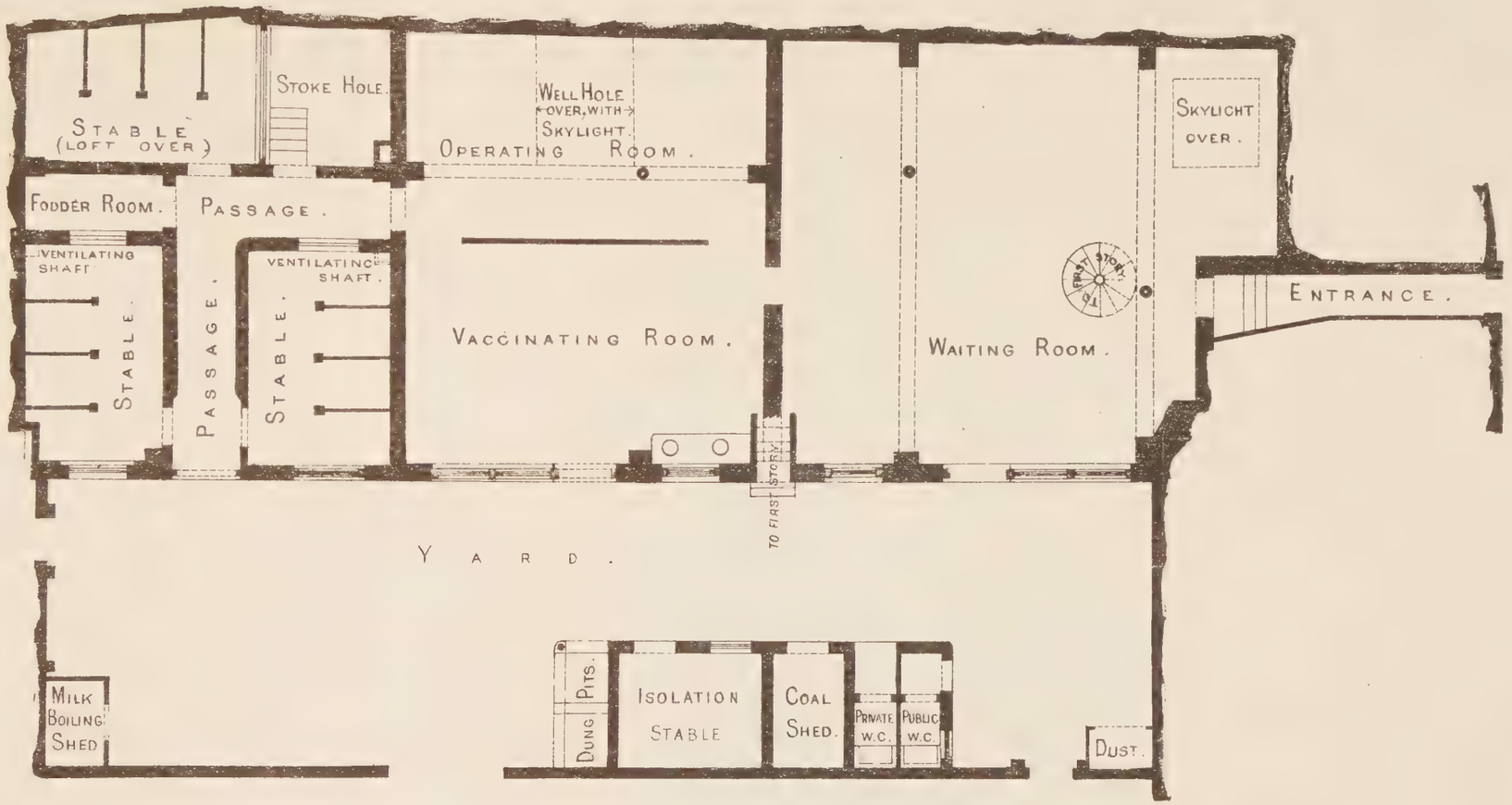
b. The supply of lymph to the National Vaccine Establishment;

c. The direct vaccination of another calf;

d. The vaccination of another calf on the following Saturday.

ANIMAL VACCINE STATION

LAMB'S CONDUIT STREET. W.C.



PLAN OF GROUND STORY.

10 5 0 10 20 30 FEET

6347.

DANGERFIELD. LITH 22. BEDFORD St COVENT GARDEN

The calf vaccinated on Thursday provides lymph on Tuesday for—

a. The direct vaccination of children at the station;

b. The supply of lymph to the National Vaccine Establishment.

As a matter of practice it is also customary to retain for subsequent use a few tubes of lymph derived from the best developed vesicles. This becomes available in case of any deterioration in the quality of the vesicles.

From April 1882 until July 1882 the duration of the stay of a calf in the station amounted to 14 days. Experience gained during this time showed the need for an additional calf to be maintained in case of any unfitness of a calf for vaccination. After July, therefore, one of the two calves received every week was retained three instead of two weeks.

In November of the same year it was thought desirable to double the number of calves vaccinated every week, and since that month two calves have been vaccinated every Thursday and every Saturday.

Inspection of calves.

The calves on their arrival were placed in the isolation stable until they had been approved by an inspector of the Veterinary Department of the Privy Council as fit for inoculation, and they were then admitted into the other stables.

These arrangements were continued until, in February 1883, the prevalence of foot-and-mouth disease in the country made it necessary that special precautions should be taken to prevent the infection with this disease of the calves in the Animal Vaccine Establishment.

Thenceforward the calves were subjected to preliminary observation, being first received into "quarantine" premises which had been secured for this purpose in Somers Town, N.W. They were retained in this station for six days, and were only conveyed to Lamb's Conduit Street after their freedom from foot-and-mouth disease was assured and they were otherwise in good health.

With a view to preventing subsequent infection, precautions were taken in the manner of removal of the calves from one station to the other, and means were taken to prevent the introduction into the institution of disease conveyed in the milk or by the manure cart. The result has been altogether satisfactory, and the calves have remained in good health.

Origin and descent of lymph.

The lymph stock in use at the time of the last report has been continued until the present time. It was obtained originally on November 26th, 1881, at a farm in the village of Laforêt not far from Bordeaux, and a sample of lymph from the 17th calf in succession from the original one was sent by Dr. Dubreuilh of Bordeaux to the Medical Officer of the Local Government Board.

Calf 50 was vaccinated with this lymph, and the stock maintained since by vaccination of successive calves.

The following Table (Table I.) shows the descent of the *Lymph*, the *Weight*, *Sex*, and *Colour* of the *Calf*, and the character of the *Vesicles*.

TABLE I.

Date of Vaccination and Number of Calf, placed in order of date of Vaccination.	Origin and Descent of Lymph.	Weight of Calf. lbs. av.	Sex.	Colour.	Character of Vesicles.
1882.					
April 6 - Calf 54	From calf 51 & 52	136	M	Roan - -	Moderate.
„ 8 - „ 55	„ 52 -	148	M	Do. - -	Good.
„ 13 - „ 56	„ 55 -	420	F	White - -	Moderate.
„ 15 - „ 57	„ 55 & 56	374	F	Do. - -	Good.
„ 20 - „ 58	„ 57 -	154	F	Do. - -	Do.
„ 22 - „ 59	„ 57 -	134	F	Do. - -	Do.
„ 27 - „ 60	„ 59 -	221	M	Red and white -	Moderate
„ 29 - „ 61	„ 59 -	174	M	Do. - -	Do.
May 4 - „ 62	„ 61 -	176	M	Red - -	Good.
„ 6 - „ 63	„ 61 -	189	M	Roan - -	Moderate.
„ 11 - „ 64	„ 63 -	186	M	Do. - -	Do.
„ 13 - „ 65	„ 63 -	187	M	Do. - -	Do.
„ 18 - „ 66	„ 65 -	152	M	White - -	Good.
„ 20 - „ 67	„ 65 -	146	M	Roan - -	Do.
„ 22 - „ 68	„ 67 and Bordeaux stock.	322	F	Do. - -	Moderate.
„ 27 - „ 69	From calf 51 -	249	F	Do. - -	Good.
June 1 - „ 70	„ 69 -	312	F	Do. - -	Do.
„ 3 - „ 71	„ 69 -	233	F	Do. - -	Do.
„ 8 - „ 72	„ 71 -	282	F	Red and white -	Do.
„ 10 - „ 73	„ 71 -	288	F	Do. -	Moderate.
„ 15 - „ 74	„ 73 -	261	F	Do. -	Good.
„ 17 - „ 75	„ 69 & 71	261	F	Do. -	Do.
„ 22 - „ 76	„ 75 -	235	F	Do. -	Moderate.
„ 24 - „ 77	„ 75 & 59	217	M	Do. -	Do.
„ 29 - „ 78	„ 77 -	222	F	Roan - -	Very good.
July 1 - „ 79	„ 77 -	178	F	Do. - -	Good.
„ 6 - „ 80	„ 79 -	234	M	Red and white -	Do.
„ 8 - „ 81	„ 79 -	213	M	Do. -	Moderate.
„ 13 - „ 82	„ 78 -	228	F	Do. -	Do.
„ 15 - „ 83	„ 79 -	156	F	Do. -	Good.
„ 20 - „ 84	„ 83 -	256	M	Do. -	Moderate.
„ 22 - „ 85	„ 83 -	238	M	Do. -	Very good.
„ 29 - „ 86	„ 85 -	238	M	Red - -	Good.
Aug. 3 - „ 87	„ 86 -	248	M	Red and white -	Do.
„ 5 - „ 88	„ 85 -	277	M	Blue - -	Very good.
„ 10 - „ 89	„ 88 -	278	M	Do. - -	Do.
„ 12 - „ 90	„ 87 -	301	M	Red and white -	Moderate.
„ 17 - „ 91	„ 90 -	276	M	Do. -	Good.
„ 19 - „ 92	„ 89 -	274	M	Roan - -	Very good.
„ 24 - „ 93	„ 92 -	276	M	Red and white -	Indifferent.
„ 26 - „ 94	„ 92 -	251	M	Do. -	Moderate.
„ 31 - „ 95	„ 88 -	251	M	Do. -	Good.
Sept. 2 - „ 96	„ 83 -	348	M	Do. -	Moderate.
„ 7 - „ 97	„ 96 -	266	F	Do. -	Very good.
„ 9 - „ 98	„ 95 -	285	M	White - -	Do.
„ 14 - „ 99	„ 98 -	353	M	Do. - -	Good.
„ 16 - „ 100	„ 98 -	290	M	Blue and white -	Very good.
„ 21 - „ 101	„ 100 -	301	M	Blue - -	Moderate.
„ 23 - „ 102	„ 100 -	404	F	White - -	Indifferent.
„ 28 - „ 103	„ 102 -	346	F	Red and white -	Very good.
„ 30 - „ 104	„ 100 & 97	304	M	Red - -	Indifferent.
Oct. 5 - „ 105	„ 103 -	280	M	Blue - -	Good.
„ 7 - „ 106	„ 103 -	322	M	Red and white -	Very good.
„ 12 - „ 107	„ 106 -	276	M	Red - -	Moderate.
„ 14 - „ 108	„ 106 -	327	M	Do. -	Do.
„ 19 - „ 109	„ 108 -	312	M	Do. -	Good.
„ 21 - „ 110	„ 108 -	364	M	Red and white -	Moderate.
„ 26 - „ 112	„ 110 -	364	F	White - -	Good.
„ 28 - „ 113	„ 109 -	347	F	Red and white -	Moderate.
Nov. 2 - „ 114	„ 112 & 113	354	F	Do. -	Do.
„ 4 - „ 115	„ 112 -	370	F	Do. -	Failed.
„ 9 - „ 116	„ 105 -	315	F	Red - -	Good.
„ 11 - „ 118	„ 105 -	196	F	White - -	Good.
„ 16 - „ 119	„ 118 -	270	F	Do. -	Moderate.
„ 16 - „ 120	„ 103 -	258	M	Roan - -	Do.
„ 16 - „ 120	„ 118 -	258	M	Do. -	Good.
„ 18 - „ 121	„ 116 & 118	274	M	Yellow and white	Do.
„ 18 - „ 122	„ 118 -	270	F	Red and white -	Indifferent.
„ 23 - „ 123	„ 121 -	242	M	Roan and white -	Very good.

Date of Vaccination, and Number of Calf, placed in order of date of Vaccination.	Origin and Descent of Lymph.	Weight of Calf. lbs. av.	Sex.	Colour.	Character of Vesicles.
1882.					
Nov. 23 - Calf 125	From calf 121 -	336	M	Red - -	Good.
„ 25 - „ 126	„ 121 -	332	F	Red and white -	Indifferent.
„ 25 - „ 127	„ 121 -	280	M	Do. -	Moderate.
„ 30 - „ 128	„ 123 -	294	M	Roan and white -	Do.
„ 30 - „ 129	„ 127 & 123	266	M	Do. -	Indifferent.
Dec. 2 - „ 130	„ 123 -	285	M	Black - -	Indifferent.
„ 2 - „ 131	„ 123 -	280	M	Black and white	Good.
„ 7 - „ 132	„ 130 & 131	280	M	Red and white -	Do.
„ 7 - „ 133	„ 131 -	224	M	Roan - -	Moderate.
„ 7 - „ 133	„ 110 -	224	M	Do. -	Indifferent.
„ 9 - „ 134	„ 118 & 131	356	F	Black - -	Moderate.
„ 9 - „ 135	„ 131 & 110	290	M	Blue - -	Good.
„ 14 - „ 136	„ 135*b* -	274	M	Spot - -	Indifferent.
„ 14 - „ 137	„ 135*b* -	252	M	Red and white -	Moderate.
„ 16 - „ 138	„ 135*b* -	298	M	Blue - -	Do.
„ 16 - „ 139	„ 135*b* -	266	F	White - -	Indifferent.
„ 21 - „ 141	„ 138 -	222	M	Red and white -	Good.
„ 21 - „ 142	„ 132*b* -	260	M	Roan - -	Do.
„ 21 - „ 142	„ 51 -	260	M	Do. -	Indifferent.
„ 23 - „ 143	„ 132*b* -	236	M	Yellow and white	Moderate.
„ 23 - „ 144	„ 131 -	246	M	Red - -	Good.
„ 28 - „ 145	„ 144 -	244	M	Red and white -	Do.
„ 28 - „ 146	„ 143 -	270	F	Roan - -	Indifferent.
„ 30 - „ 147	„ 143 -	258	M	Red - -	Good.
„ 30 - „ 148	„ 144 -	210	F	Blue - -	Moderate.
1883.					
Jan. 4 - „ 149	„ 147 -	274	M	Red and white -	Very good.
„ 4 - „ 150	„ 148 -	252	F	Brown - -	Do.
„ 6 - „ 151	„ 147 -	255	M	Roan - -	Indifferent.
„ 6 - „ 152	„ 145 -	224	M	Black - -	Moderate.
„ 11 - „ 153	„ 152 -	162	M	Red - - -	Good.
„ 11 - „ 154	„ 145 -	160	M	Red and white -	Failed.
„ 13 - „ 155	„ 150 -	260	M	Spotted - -	Indifferent.
„ 13 - „ 156	„ 147 -	280	M	Roan - -	Do.
„ 18 - „ 157	„ 50 -	262	M	Red and white -	Moderate.
„ 18 - „ 158	„ 155 -	242	M	Red - -	Indifferent.
„ 20 - „ 159	„ 148 -	397	F	Black and white	Very good.
„ 20 - „ 160	Original Bordeaux lymph,	208	M	Black - -	Good.
„ 23 - „ 161	From calf 157 -	214	M	Black and grey -	Moderate.
„ 25 - „ 162	„ 159 -	143	F	Red - -	Good.
„ 25 - „ 163	„ 160 -	258	M	Do. - -	Very good.
„ 27 - „ 164	„ 161 -	174	M	Do. - -	Indifferent.
„ 27 - „ 165	„ 161 -	206	M	Do. - -	Do.
Feb. 1 - „ 166	„ 165 -	300	M	Red and white -	Good.
„ 3 - „ 167	„ 163 -	294	M	Red - -	Do.
„ 3 - „ 168	„ 163 -	392	M	Black - -	Indifferent.
„ 6 - „ 169	„ 166 -	400	M	Red and white -	Moderate.
„ 8 - „ 170	„ 167 -	168	M	Roan and white -	Very good.
„ 8 - „ 171	„ 167 -	258	M	Black and white	Do.
„ 10 - „ 173	„ 167 -	154	M	Do. - -	Do.
„ 10 - „ 174	„ 169 -	240	F	Black - -	Good.
„ 15 - „ 172	„ 173 -	168	M	Red - -	Very good.
„ 15 - „ 175	„ 173 -	120	M	Do. - -	Good.
„ 17 - „ 176	„ 173 -	168	F	Red and white -	Very good.
„ 17 - „ 177	„ 173 -	170	F	Red - -	Good.
„ 22 - „ 178	„ 176 -	122	M	Do. - -	Do.
„ 22 - „ 179	„ 177 -	112	M	Red and white -	Moderate.
„ 24 - „ 180	„ 176 -	124	M	Roan - -	Do.
„ 24 - „ 181	„ 176 -	124	M	Red - -	Very good.
Mar. 1 - „ 182	„ 181 -	154	M	Red and white -	Moderate.
„ 1 - „ 183	„ 181 -	134	M	Roan - -	Do.
„ 3 - „ 184	„ 181 -	154	F	Yellow and white	Very good.
„ 8 - „ 186	„ 184 -	164	F	Roan and white -	Very good.
„ 10 - „ 185	„ 184 -	300	M	Red and white -	Indifferent.
„ 15 - „ 187	„ 185 -	280	M	Red - -	Good.
„ 17 - „ 188	„ 186 -	130	F	Red and white -	Do.
„ 22 - „ 189	„ 188 -	173	F	Red - -	Very good.
„ 22 - „ 190	„ 188 -	168	M	Red and white -	Indifferent.
„ 24 - „ 192	„ 188 -	160	M	Do. -	Very good.
„ 24 - „ 194	„ 188 -	204	M	Roan - -	Not stated.
„ 29 - „ 195	„ 192 -	145	M	Do. -	Moderate.
„ 29 - „ 196	„ 192 -	152	M	Red and white -	Do.
„ 31 - „ 197	„ 192 -	142	M	Do. -	Good.
„ 31 - „ 191	„ 192 -	198	M	Do. -	Moderate.

Calves Nos. 58, 111, 117, 124, 140, and 193 were out of health and were not vaccinated at all.

App. A. No. 5.

On the Operations of the Animal Vaccine Establishment; by Mr. Murphy

Weight of calves.

The average weight of the calves on admission was 247·0 lbs., on leaving 264·9 lbs., giving an average increase of weight for each calf of 17·9 lbs. Of the total number of calves all increased in weight but 11, in 4 there was no change of weight, and in 7 there was a loss.

The character of the vesicle appears to have been influenced by the weight of the calf, the heavier calves producing less satisfactory results than the lighter, a result probably due in a great extent to the age of the calf, the finer skin on the younger calf producing the better vesicles. Latterly a record has been kept of the condition of the skin, whether fine or coarse, scaly or otherwise. The observations have not been sufficiently extensive for any but a general statement to be made that the presence of roughness appears to affect the quality of the vesicles.

			lbs.
Calves producing	indifferent vesicles	had an average weight of	274·9
„	moderate	„ „	254·9
„	good	„ „	234·5
„	very good	„ „	236·4

Sex of calves.

The same results have not been obtained equally from male and from female calves. Omitting 2 calves, the vaccination of which failed, 1 in which no statement of the result was given, and 6 which were not vaccinated, we have the following results:—

17·5	per cent.	of the males	had very good vesicles.
21·4	„	females	„ „ „
31·9	„	males	good vesicles.
42·9	„	females	„ „
35·1	„	males	moderate vesicles.
23·8	„	females	„ „
15·4	„	males	indifferent vesicles.
11·9	„	females	„ „

The experience of the year is slightly in favour of female calves, 64·2 per cent. of the female calves produced "very good" or "good" vesicles, while only 49·4 per cent. of the male calves produced vesicles of this class. The number of female calves vaccinated is, however, too small for any great value to attach to these figures.

From April 11, 1882, to the end of March 1883, 614 children were primarily vaccinated at the station, and 29 re-vaccinations were performed. Of the former, 6 failed, 5 of which were vaccinated directly from the calf, and 1 with stored lymph. All but one were subsequently successfully vaccinated; one of the six was not again vaccinated.

Results obtained from animal and humanized lymph.

The following table shows the success in each hundred of insertions of lymph. The per-centages are calculated upon 576 direct vaccinations with animal lymph, and 34 vaccinations with animal lymph stored in tubes.*

For the purposes of comparison results obtained with humanized lymph in 150 cases of direct vaccination and 34 of vaccinations with lymph stored in tubes at Surrey Chapel are given.

Three operators were concerned in the various vaccinations. Broadly speaking, they were of equal skill, yet each operator had not exactly the same degree of success, and this fact, together with the smallness of the number of cases of vaccination with stored lymph, are reasons for not attaching any great value to the figures, but it is thought well to put them on record.

* Subsequent experiment gives a greater value to calf-lymph stored on points than to that stored in tubes.

Insertion Success.

	Animal.	Humanized.
Direct	96·3	95·0
Tubes	71·7	57·9

The age of the stored animal-lymph varied from 2 to 270 days. The age of the stored humanized lymph varied from 2 to 141 days.

The average diameter of the vesicles estimated upon the same cases as above is shown in the following table :—

Average Diameter of Vesicles, in Inches.

	Animal.	Humanized.
Direct	·39	·36
Tubes	·31	·28

The average extent of areola estimated on the same cases is shown in the following table :—*

Extent of Areola, in Inches.

	Animal.	Humanized.
Direct	·38	·34
Tubes	·21	·18

These tables will suffice to show that the local effects of inoculation of calf-lymph are practically the same as those produced by humanized lymph, a statement which may also be made concerning the constitutional symptoms produced by the two kinds of lymph.

The same need for care was required in the selection of vesicles for the further cultivation of lymph on the calf, and for the vaccination of children as in the case of arm to arm vaccination with humanized lymph; and from time to time it became necessary for the purpose of maintaining the supply of lymph to revert for the vaccination of a calf to lymph derived from an earlier calf than that immediately antecedent to it.

Of the total number of calves from which children were vaccinated, but six produced lymph which could be regarded as being responsible for a partial failure of the vaccination of children inoculated with it.

In conclusion it may be repeated that judged by the experience gained during the first year's operations at the Animal Vaccine Establishment, animal lymph "takes" with as much certainty as humanized lymph, and produces similar local and constitutional effects.

It only remains for me to state that from April 1, 1882 to March 31, 1883 (both days inclusive), 5,560 charges of calf-lymph have been supplied from this station to the National Vaccine Establishment at the Local Government Board. These have consisted of 4,305 points and 1,255 tubes, collected on the 5th day after vaccination, and transmitted on the day of collection. Each point and each tube is charged with a quantity of lymph, so that two points or one tube are amply sufficient for the vaccination of one individual.

* More recently the amount of areola accompanying direct vaccination with animal-lymph has been much reduced, the average of the last 100 cases has been ·22 of an inch, the average size of the vesicle in the same cases being ·37 of an inch.—July 24, 1883.

App. A. No. 6.

Abstract of Vaccination Laws in Europe.

No. 6.

Notes prepared from Official Documents as to the Laws regulating Vaccination in European Countries. (1882.)

The following memorandum has been compiled from the official reports and other documents procured for the Local Government Board through the Foreign Office in compliance with the Board's request.

The vaccination laws and their modes of enforcement vary considerably in the different countries of Europe, but provisions for securing the vaccination, and, in some cases the re-vaccination, of children attending schools and of persons engaged in the public services, are almost universal.

Austrian Empire.

(*a.*) *Austria.*

In Austria vaccination is not legally obligatory on the people generally, but is "carried out as far as practicable." On the following classes of persons, however, the operation is compulsory :—

(1.) Wards of State provident institutions.
(2.) Children in orphan houses.
(3.) All persons obtaining scholarships.
(4.) All persons entering charitable institutions.
(5.) All persons to whom free education is granted.
(6.) Candidates for the military educational institute.

There is no special rule as to the vaccination of persons entering the army or navy, but all such persons are medically examined prior to their admission, and where it is doubtful whether the candidate has previously been successfully vaccinated, the operation is performed.

The law regulating the performance of vaccination in Austria was passed in 1836, and has only been altered so far as was necessary to make it compatible with the present system of government.

(*b.*) *Hungary.*

In Hungary vaccination is performed under a law passed in the year 1876. By this law parents and guardians and all persons having charge of children are bound to have them vaccinated within a year of their birth, unless they have had the small-pox. Only vaccinated children are admitted to the military and civil educational institutes.

Belgium.

Vaccination is not compulsory in Belgium. The only legislative enactment of a general character on the subject is a decree of 1818, prescribing measures for extending the system of inoculation of vaccine matter. It is very limited in its action, applying only to certain classes of citizens. Moreover, it does not impose the duty of carrying out its provisions upon the Government, but upon the provincial and communal administrations and charitable institutions. Each province has a special regulation on the subject of vaccination; and the communal administrations can, and in many cases have, established systems for promoting the operation.

The question of making vaccination compulsory has of late been frequently discussed in Belgium, and the Academy of Medicine, as well as the majority of medical men, advocate legislation in this sense; but up to the present time (June 1881) the Government have taken no steps in the matter.

Denmark.

In Denmark, examinations and quarantine are enforced to prevent small-pox epidemics, and vaccination appears to have been obligatory since 1810.

Re-vaccination is generally not enjoined, but an ordinance of 1836 requires the re-vaccination of all recruits for the army.

France.

In France vaccination is not at present compulsory on the general population, but strict regulations exist requiring its performance on members of the army and navy. The operation is frequently performed by midwives, and the arrangements generally are very defective.

Army.—By an order of 30th June 1848, all recruits whose vaccination marks were doubtful or wanting, had to be vaccinated on joining the army.

This order having been followed by a diminution of small-pox in the army, a further and more stringent order was issued on the 31st December 1857, directing that all recruits should be vaccinated on joining their regiments whether they had been previously vaccinated or not. By this order also, re-vaccination was made compulsory throughout the army.

In 1876 it was found that vaccination and re-vaccination were not sufficiently carried out under the above orders; further regulations were therefore issued on the 1st March 1876 and the 16th June 1877, impressing upon the military authorities the necessity of securing the early performance of the operation.

Navy.—By an order of 30th November 1869, every man is required to be vaccinated within eight days of his joining the navy unless he bears undoubted marks of small-pox. This order has been followed by good results, small-pox being now rare in ships at sea.

German Empire.

In the German empire, prior to 1875, different modes of enforcing vaccination existed, and the stringency of the vaccination laws varied in different states:—

(*a.*) *Baden.*

In the Grand Duchy of Baden vaccination has been compulsory since 1815:—

(*b.*) *Bavaria.*

In the kingdom of Bavaria it was introduced eight years earlier by a royal ordinance of 26th August 1807. Re-vaccination was not compulsory on the general population prior to 1875, but under the police regulations for Bavaria of 1871 re-vaccination could be ordered at any time by the proper authorities as a precaution against the outbreak of small-pox:—

(*c.*) *Hesse-Darmstadt.*

In the Grand Duchy of Hesse the practice was also introduced in 1807, but appears not to have been made compulsory until some little time after. Under the law, as it existed in Hesse before 1875, children were usually subjected to vaccination at a much earlier age than they are now, and there were scarcely any refusals to comply with the law :—

(*d.*) *Saxe-Coburg-Gotha.*

Compulsory vaccination in the Duchies of Saxe Coburg and Gotha dates from the year 1829, and to a certain extent from an earlier period :—

(*e.*) *Würtemberg.*

Compulsory vaccination was introduced into the kingdom of Würtemberg by a law passed on the 25th June 1818 :—

In 1875, however, all the laws for the enforcement of vaccination existing in the different German states were superseded by the Imperial vaccination law passed on the 8th April 1874, which applies to the whole of the German empire. Under this law every child must be vaccinated before the end of the calendar year next following the year in which he or she was born, unless it be proved by medical certificate that the said child has already had the small-pox.

Every pupil of a public or private school has to be vaccinated within the year next following that in which the said pupil has completed his or her 12th year, unless it be proved by a medical certificate that he or she has had the small-pox or been successfully vaccinated within the last five years. If the operation is illegally left undone, the court may fix a time for its performance.

As regards the army and navy, every man on entering either of these services is obliged to be re-vaccinated, even if he already bear marks of successful primary vaccination.

HOLLAND.

In Holland the basis of the existing law relating to vaccination is contained in an Act passed on 4th December 1872. By section 17 of that Act it is provided that "schoolmasters, schoolmistresses or pupils, "who are not in possession of a declaration signed by a physician "setting forth that they have been successfully vaccinated, or vaccinated "more than once, or have had small-pox naturally, shall not be "admitted into schools."

ITALY.

Various laws as to vaccination exist in the different States of Italy, but the operation does not appear to be anywhere directly obligatory. Children, however, are not admitted to the schools and public institutions unless they have been vaccinated or have had the small-pox. There are no general laws or regulations concerning re-vaccination.

In the Italian navy since 1865 the men are vaccinated immediately on their enrolment, whether or not they have previously had the small-pox or been vaccinated. The regulations in the army are the same as those observed in the navy.

MONTENEGRO.

From a despatch dated 11th June 1881 from the Montenegrin Minister for Foreign Affairs, it appears that at that time there was no

written law regulating vaccination in Montenegro. It was the practice, however, for the Government to send a doctor through the country, or to the chief place of each district, every two or three years, and the people were obliged to bring their children who had not been vaccinated. The Government have recognised the insufficiency of this method and have given directions for the preparation of a general regulation relating to vaccination.

Norway.

In Norway an ordinance of the 3rd April 1810 (*section* 7) provides that children shall not be received into schools except upon production of evidence of their vaccination or of their having had small-pox. The same rule applies to apprentices, to corporations, and to persons received as pensioners in the public institutions, (*section* 8). Soldiers are vaccinated immediately on joining the service unless they produce the "ordained" certificate (*section* 9) or show unmistakeable marks of having had small-pox. Candidates for confirmation who have not been vaccinated or had small-pox are admonished by the clergyman to have the operation at once performed, and since the 1st January, 1811, clergymen have been forbidden to marry any couple unless they prove that they have either been vaccinated or had small-pox (*section* 10).

Sweden.

In Sweden the Act in force is dated 29th September 1853 and requires (*section* 1*a*) the vaccination of all children before they attain the age of two years, unless they have already had small-pox. No person can be admitted into any public school, college, or educational establishment unless he prove vaccination, small-pox, or insusceptibility (*section* 2). No child can be delivered up from any orphan house for education except on production of a certificate of vaccination or small-pox (*section* 3). The clergy are directed to encourage vaccination as much as possible (*section* 13). Penalties are provided for persons who, not being vaccinated, are seized with small-pox (*section* 23*b*, *page* 33).

Roumania.

As regards Roumania, up to the year 1874, primary vaccination does not appear to have been directly compulsory, though the performance of the operation was indirectly attained by requiring all boys and girls attending schools to give proof of their having been vaccinated. In 1874 a law was passed under which vaccination was made obligatory upon the entire population, and re-vaccination upon children of seven years and upwards.

Servia.

In Servia the present law regulating the performance of vaccination came into operation in May 1881. Every newly-born child is now required to be vaccinated before it attains the age of 12 months (*section* 20 (6*a*)); and every child must be re-vaccinated on completing the course of the elementary schools. (*Ibid.*)

Every recruit must be vaccinated on joining the army whether he shall have previously been vaccinated or not. (*Ibid.*)

Where parents persistently neglect or refuse to have their child vaccinated a heavy fine (4*l.*) is imposed if the child subsequently takes small-pox and the disease spreads.

When small-pox breaks out in any commune extraordinary attendances of the public vaccinator are at once arranged, and all the inhabitant of the commune can be re-vaccinated, whether they have been previously re-vaccinated or not.

Provisions relating to vaccination similar in theory to the law of 1881 existed before that year, but re-vaccination was not compulsory, and there was no machinery for enforcing the law.

Spain.

In Spain no general enactment relating to vaccination existed before the decree of 30th December 1873, though the Spanish Government have favoured the performance of vaccination since its discovery. The decree referred to does not make the operation obligatory upon the population generally, but only upon individuals who are immediately under the control of the civil authorities in workhouses, colleges, penal establishments, and hospitals, and upon men in the army and navy. The decree, however, directs provincial and municipal authorities to exert what power they may possess in order to oblige all individuals immediately dependent on them to be vaccinated or re-vaccinated, and to propagate the notion of the convenience of vaccination among private individuals.

Switzerland.

The vaccination laws of Switzerland vary in the different cantons. The operation is compulsory in all except Bâle-ville, Uri, Glarus, and Geneva. In Glarus the compulsory clauses were repealed in 1876.

Re-vaccination is generally compulsory in the cantons of Fribourg and the Grisons. In Zurich, Zug, Argovie, and Neuchâtel re-vaccination is compulsory only in infected houses and during an epidemic. In the Soleure Canton the general performance of re-vaccination can be ordered during an epidemic by the sanitary authority. In several other cantons the operation is merely encouraged, and in some no definite regulations on the subject exist.

In 1871 the re-vaccination of all recruits was ordered, and the order was confirmed by a Federal decree passed in 1873.

In 1881 an attempt was made to introduce a general vaccination law which should be applicable to the whole of the Swiss confederation. The bill passed the Federal Chambers, but on reference to the popular vote it was thrown out by a large majority. The old arrangement by which each canton controls its own vaccination laws remains therefore in force. Probably the decision of the people against the Federal law proceeded from the objection of the cantons to transfer their own rights to the Federal government, rather than to any direct objection to compulsory vaccination. Bâle-ville appears to be the only canton which has recently repealed its compulsory vaccination law in consequence of the anti-vaccination movement.

Turkey.

No law exists in Turkey for the regulation of vaccination, but there are certain establishments at which all persons desiring to be vaccinated can have the operation performed. In addition, vaccinators are occasionally sent to the Bosphorus villages to vaccinate all who desire it.

We have no information as to the vaccination laws in Portugal or Russia.

Abstract of the principal Information contained in the foregoing Memorandum.

Countries.	Vaccination is directly compulsory.	Vaccination is not directly compulsory.	Vaccination is not generally compulsory; but is compulsory						Present Vaccination Law came into Force.	Re-vaccination is Compulsory.	Proportion of Children due for Vaccination, but not Vaccinated at end of Year. (For Period, *see* individual Return.)	—
			In Army.	In Navy.	On Children attending Schools.	Military Educational Establishment.	Children in Orphan Houses.	Persons entering Charitable Institutions or under control of Civil Authority.				
Austria -	—	1	1	1	1	1	1	1	1836	—	Average. 15·2	
Hungary -	1			—	1	1	—	—	1876	—	—	
Belgium -		1		—	—		—	—	1818	—	—	Vaccination law not administered by Supreme Government.
Denmark -	1	—	—	—	—	—	—	—	1871	On army recruits.	—	Vaccination "always obligatory."
France -	—	1	1	1	—	—	—	—	—	Army and Navy.	33·3	
German Empire	1	—	—	—	—	—	—	—	1875	Yes	14·3	
Holland -	—	1	—	—	1	—	—	—	1872	—	—	
Italy - -	—	1	1	1	1	—	—	—	Various.	—	—	
Montenegro -	—	1	—	—	—	—	—	—	No law.	—	—	
Norway -	—	1	1	—	1	—	—	1	1810	—	—	Vaccination certificates necessary on marriage.
Sweden -	1	—	—	—	—	—	—	—	1853	On recruits	16·1	Penalties on unvaccinated small-pox patients.
Portugal							No information.					
Roumania -	1	—	—	—	—	—	—	—	1874	Yes	—	
Russia -							No information.					
Servia -	1	—	—	—	—	—	—	—	1881	Yes	—	Penalties on unvaccinated small-pox patients.
Spain - -	—	1	1	1	—	—	—	1	1874	—	—	
Switzerland -	In all but 4 cantons.	In 4 cantons.	1	—	—	—	—	—	—	In some cantons.	—	
Turkey -	—	1	—	—	—	—	—	—	—	—	—	

App. A. No. 7.

On Dr. Cory's Experiments in vaccinating himself from Syphilitic Children.

No. 7.

Report by a Committee appointed to investigate Dr. Cory's Experiments in vaccinating himself from Syphilitic Children.

Dr. Robert Cory, the subject of this inquiry, aged now 38 years, was vaccinated in infancy, re-vaccinated the first time, he states, 22 years ago, and a second time in Germany in 1871 or 1872. There are visible two large, flat, apparently primary vaccination scars, one on each arm, and in addition, on the right arm, three small apparently *re*-vaccination scars.

On four occasions since, he has vaccinated himself, or caused himself to be vaccinated, from obviously syphilitic infants, being on each occasion in his ordinary condition of health. He had never previously suffered from syphilis.

The following are the particulars of these vaccinations, as we have been able to gather them from notes kept by Dr. Cory and from inquiries made by ourselves to the extent that it has been found practicable to make them after the lapse of a varying number of years:—

First Experiment.

This was performed in the year 1877 or 1878, from an infant aged eight months, who had been brought for inspection to the Surrey Chapel Vaccination Station. The infant was regarded by Dr. Cory as unquestionably syphilitic, and was much emaciated; but at the time when the lymph was taken there was no eruption present on the skin, nor was there any other obvious symptom of active syphilis. The lymph was taken on the eighth day, as is customary. The vaccine vesicles were noted as normal in appearance, but delayed in development.

From one of these vesicles Dr. Cory vaccinated himself in one place just above the left wrist. He most carefully avoided, in taking the lymph, so puncturing the vesicle as to obtain lymph containing an admixture with blood; and in fact, had the lymph obviously contained any blood, he would not have used it.

The vaccination was successful; the resultant vesicle attained its height on the fourth or fifth day, and then declined. The inflammation about it was very limited in extent, but the glands in the axilla became tender, although not perceptibly enlarged.

No scar from this vaccination is now discernible.

No syphilitic trouble followed.

Second Experiment.

This was performed on November 5th, 1879.

The vaccinifer was a male infant, aged 85 days, who had been under mercurial treatment for syphilis at St. Thomas's Hospital for about four days when used by Dr. Cory for the purpose of his experiment. At that time there were present on the infant manifestations of active syphilis. There were copper-coloured spots on each cheek, extending over the nose, and small spots round the mouth, which had lasted for three weeks. The child had marked 'snuffles,' which had been present from its birth.

From this infant Dr. Cory vaccinated himself, taking the lymph very carefully so as to avoid any admixture of blood. The vesicles on the

child's arm were in the eighth day of their development and are noted in the vaccination register as "good vesicles." There were five of them.

This attempt at vaccination was unsuccessful. No pock arose, but on the day after the operation an areola is noted as having been observed; it declined on the third day.

No syphilitic trouble followed.

Third Experiment.

This was performed on May 11th, 1881.

The vaccinifer was a male infant, aged 4½ months, who was attending the out-patient department of St. Thomas's Hospital for syphilis, being under the care of Mr. Anderson. He was, at the time of his vaccination, under mercurial treatment. The following notes of the case were given to Dr. Cory by Mr. Anderson on June 22nd:—"Healthy at birth; at "the age of six weeks attended the hospital for 'hydrocele'; at that time "there were no signs of syphilis. At the age of three months there "was observed a roseolar eruption chiefly about the nates, there were "mucous tubercles about the angles of the mouth, 'snuffling,' emacia-"tion, and a cachetic aspect. The child improved rapidly under the "mercurial treatment. On June 7th, when he attended again for a "spasmodic affection of the muscles of the left knee, he was in a good "condition and free from signs of syphilis; he was then still taking "grey powder."

When Dr. Cory took lymph from this infant on May 11th, the eighth day of the vaccine development, the vesicles are noted to have been of the normal appearance and not inflamed. They are noted as having resembled vesicles in other cases in which grey powder was being taken.

Again Dr. Cory took the lymph with the utmost care to avoid admixture with blood, and with it vaccinated himself in two places at the upper part of the left fore-arm.

On the day following, an areola of about 16 m.m. in extent from the centre was noted around each puncture. It had declined by the evening of that day, and then quickly disappeared. The vaccination was unsuccessful; no pock arose.

No syphilitic trouble followed.

Fourth Experiment.

This was performed on July 6th, 1881, at Dr. Cory's request, by Mr. Haslam, now assistant surgeon to the Birmingham General Hospital.

The vaccinifer was a female infant aged 84 days. The history of the child was that soon after birth she suffered from 'thrush,' from which she recovered completely. Ten days after birth she began to have 'snuffles.' When about four weeks of age an eruption appeared upon the arms, and it was still present when the lymph was taken for Dr. Cory's experiment. In addition, there was at that time a sore upon the right buttock, and a sore also in the left nostril.

At the time Dr. Cory used this vaccinifer there were five vesicles on the arm, and they are described as normal in appearance and not inflamed. The immediate neighbourhood of the vesicles was free from eruption.

Although Mr. Haslam performed the operation on Dr. Cory, Dr. Cory himself took the lymph. An ordinary lancet was used. The

vesicles were shallow, and therefore difficult to prick without drawing blood. The first vesicle which Dr. Cory opened bled, and he therefore abandoned it, and after wiping the lancet clean opened another. This did not bleed, lymph exuded spontaneously, but not in great quantity. It welled up into a bead, and he took it upon the lancet, certainly without pressing the vesicle, and handed the charged lancet to Mr. Haslam. It is certain that the lancet was only charged once; it was not recharged.

With the lancet thus charged Mr. Haslam vaccinated Dr. Cory in three places on the front of the upper part of the left fore-arm. The places were arranged in form of a triangle, two above and one below, thus—

Mr. Haslam cannot recollect the order in which these places were vaccinated, but thinks it probable that the order was that indicated by the figures 1, 2, 3. It is tolerably certain that the lower one was the last of the three.

Dr. Cory states that after he had been vaccinated he took some of the remaining lymph into a tube and preserved it. The lymph was only sufficient in quantity to partially charge the tube.

The day following the operation the three places were red, with small areolæ which were declining the next day; six days later the places were quite healed. The vaccination was unsuccessful. No pock arose.

On the 21st day, viz., on July 26th, Dr. Cory observed that the lower of the three places and the outer one of the upper pair had become red and had each formed a small red papule. These papules grew slowly until August 4th, when the upper one began to desquamate, and when the scab fell from its centre, this appeared slightly moist. From this date to August 8th the papules grew more quickly, especially the upper one, and occasionally a slight areola appeared round each. On August 8th a little yellow spot appeared in the centre of the upper one, and a scab had formed over it by the morning of the 9th. The lower papule was also growing more rapidly.

On August the 11th the centre of the upper spot was covered by a very small scab, which, when removed, revealed a little ulcer. The lower papule was still dry. On this day, during the meeting of the British Medical Association at Ryde, Dr. Cory showed his arm to Dr. Humphry and Mr. Hutchinson, both of whom considered the spots to be syphilitic. At Dr. Cory's request, with the assent of Dr. Humphry and with Mr. Hutchinson's reluctant concurrence, the diseased structures were removed by excision by Dr. Humphry in the presence of Mr. Hutchinson at the Ryde Infirmary, antiseptic precautions being used. The portions excised embraced some adjoining sound skin and they were preserved by Dr. Cory for subsequent microscopical examination. The edges of the wounds were brought together with needles. The next day, the incisions having united, the pins were removed.

On the 14th the lower place was a little inflamed. On the 17th almost all tenderness on pressure over the wound had disappeared, but for the first time a gland was felt in the axilla, not painful on pressure. The antiseptic bandage had not yet been removed. On the 18th, when the wounds were again dressed, they appeared dry. The lower one was inflamed and indurated, and the places where the pins had been

had sloughed. There was great axillary trouble during the day. On the 20th the pain in the axilla was severe even when resting. Two glands in the axilla were enlarged and one of them was very painful when pressed. Feeling of tightness about the chest. On the 21st felt ill with a peculiar oppression about the sides of the chest and between the shoulders. Axilla with enlarged glands very tender. Antiseptic dressing left off. On the 22nd induration of lower wound less and axillary pain much less. Water dressing. On 23rd upper wound healing; lower one not now indurated; felt ill. On 24th the wounds were doing well, but the pain in axilla was very bad. There was a tender spot in the middle of the sternum. August 25th, commenced taking five grains of blue pill daily; very much less pain in axilla at night. August 26th, sweated much during the night, wetting night-shirt through. August 27th, rheumatic pains, but slept better at night. Upper wound healing rapidly; lower one stationary. Towards evening on 29th throat was very sore, and on 30th glands of the neck were painful, and movements of the head were painful.

On 31st felt better in health, but for the first time noticed roseolar eruption on the forehead and temples, back of neck, and below the ears, and also on lower part of the abdomen. This eruption lasted four days. He now placed himself fully under antisyphilitic treatment.

---

1. Dr. Cory has stated to us that the object he had in view in instituting these experiments upon his own person was to test a current belief that vaccine lymph taken from a syphilitic person, if unmixed with the blood of the vaccinifer, does not contain the syphilitic virus, and is incapable of imparting syphilis by its inoculation. Having acquired syphilis at his last experiment, he had (apart from any question of vaccination) a second object in having the primary lesions excised, namely, to examine microscopically the excised parts, and to ascertain whether the excision would prevent constitutional disease or modify its course. It was further in order to give this second experiment fair scope, that he abstained from submitting himself to antisyphilitic treatment until the signs of constitutional syphilis had become so clear, that doubt of the failure of excision as a preventive measure could no longer be entertained.

2. It is conclusively proved by Dr. Cory's experiments that it is possible for syphilis to be communicated in vaccination from a vaccine vesicle on a syphilitic person, notwithstanding that the operation be performed with the utmost care to avoid the admixture with blood.

3. It is to be remarked that the infants from whom Dr. Cory took lymph for his personal vaccination were, in all cases but one, not suffering from hereditary syphilis in a *latent* form, but were infants in whom *active* symptoms were unmistakably present, as shown by cutaneous eruption, snuffles, mucous tubercles, and ulcerations.

4. Moreover, out of the four children thus used, only one was proved to have been capable of imparting syphilis by the lymph taken from its vaccine vesicle.

5. Dr. Cory's case is in conformity with general experience in the following respects, among others; namely, that when syphilis is communicated by inoculation, the first appearance of the disease is at the seat of inoculation, the taint of the blood being in all cases preceded by a conspicuous, peculiar and persistent manifestation of disease at the seat of inoculation.

6. The infants from whom Dr. Cory took lymph for his experiments on his own person, were in such a condition of obvious syphilitic disease

App. A. No. 7.

On Dr. Cory's Experiments in vaccinating himself from Syphilitic Children.

as would certainly have precluded their use as vaccinifers by even an inconsiderate and reckless vaccinator. Indeed they were selected by Dr. Cory for his self-vaccination because they were unquestionable syphilitic cases. It is a rule of practice in the profession not to use in vaccination lymph taken from a child in whom there is any suspicion whatever of syphilitic taint, or indeed in whom there is any skin disease although of a character known to be harmless; and the observance of this professional rule is strictly enjoined by the Local Government Board in its instructions to public vaccinators through the country.

John S. Bristowe.
G. M. Humphry.
Jonathan Hutchinson.
Edward Ballard.

27th July 1883.

Note by the Medical Officer on the foregoing Experiments.

The relation of this case to English vaccination practice needs to be rightly apprehended.

Even before the medical profession admitted that there was any risk of the transmission of syphilis in the act of vaccination, except through the most culpable incompetence or misconduct of the vaccinator, it had laid down for strict observance the practical rule not to use the lymph of an unhealthy person, whatever the nature of the ill-health, for the vaccination of others. Acting upon this rule English vaccinators had in practice taken care to avoid using any syphilitic children as vaccinifers, and it was for a long time impossible to determine whether the absence from English practice of authentic cases of children receiving syphilis in vaccination was to be attributed to this care or to an abstract impossibility to communicate syphilis in the operation of vaccination.* And when at last it did appear that syphilis had been transmitted in vaccination, the study which it was desired to make of the circumstances under which the thing could occur was hindered by the extreme rarity of its occurrence.

By the operation of this rule of practice, insisted on by all practising vaccinators, the pathologist found himself deprived of opportunities for observing cases of syphilis transmitted in vaccination, and with this position of the question Dr. Cory was not satisfied. Should he, because, in the course of an obedience to the practical rule, he had never seen a case of syphilis among children vaccinated by him, and had never been able to see one in the practice of others, be content to know that the thing was possible, and not to understand the way of its possible occurrence? Here his scientific zeal came to the front. His object of learning would be gained, he reasoned, only if he could observe a duly devised experiment; and he had but himself to experiment on.

In the outcome, Dr. Cory's result has a certain pathological interest. The lymph of a vaccine vesicle upon an actively syphilitic child may, it would appear (though under limited conditions that remain obscure) contain the virus of syphilis even when there is no recognised ad-

---

* See Simon, in Papers relating to the History and Practice of Vaccination, 1857, pp. lxiii. and lxxxi., and in Twelfth Report (for 1869) of the Medical Officer of the Privy Council, pp. 39–45; also Seaton on Vaccination, 1868, pp. 307 and 338; also Marson, Report of Select Committee 1867, Qu. 4229, 4249; Trousseau, Lectures on Clinical Medicine, 1869, Syd. Soc. Ed. Vol. II., p. 125; Ballard, Essay on Vaccination, 1868, pp. 355 and 360.

mixture with the lymph of matters foreign to it. But that is all. For it was needful for the purpose of Dr. Cory's experiments that he should throw aside two rules which habitually guide him as they guide other people in the practice of vaccination. He had to take, and he did take, intentionally, lymph from children with strongly marked manifestations of syphilis, one of which manifestations was a pronounced skin disease. This abandonment of vaccination rules would appear furthermore to have been of the essence of his success in transmitting syphilis.

Dr. Cory's result, therefore, does not give any new rule for the guidance of the practitioner. For the practising vaccinator the obligation will remain, neither weakened nor strengthened, to "Take lymph only from subjects who are in good health"; and "Always carefully "examine the subject as to any existing skin disease and especially as to "any signs of hereditary syphilis." (Board's Instructions to public vaccinators.) And the result of Dr. Cory's experiment, in which this rule of practice was necessarily disregarded, does not at all affect the conclusion derived from long continued experience of properly conducted vaccinations, that the observance of the above rule is in practice a sufficient safeguard against the transmission of syphilis.

No. 8.

On Diphtheria in Pirbright, and on the Influence of the School there in the Behaviour of the Disease; by Mr. W. H. Power.

This inquiry was instituted under circumstances as follows:—

On the 27th November 1882 the Guildford Rural Sanitary Authority applied to the Board through its Health Officer, Mr. Joseph Smith, for advice respecting diphtheria prevalence in Pirbright that was regarded as having had relation with the operations of the National School there. Mr. Smith stated that since May last this school had on several separate occasions been closed, and each time for several weeks, on account of diphtheria among the scholars; and that diphtheria in the parish having undergone diminution or cessation during each interval of school closure, reappeared, and mainly among school children, each time that the school recommenced operations. Upon this evidence the Board directed the present investigation into the conditions of diphtheria prevalence in Pirbright.

The parish of Pirbright is situated 4–6 miles from Guildford town, at the extreme north-west of the rural district. Except to the eastward it is coterminous with parishes in the Chertsey and Farnham districts. Geologically, it is wholly on the sands and loam of the Upper and Middle Bagshot beds, the land being poor and little cultivated, consisting largely of heath and common. Notwithstanding its sandy nature, the soil cannot be regarded as dry, water being commonly held up near the surface by an impervious stratum: the water is mostly impregnated with iron. The population of the parish is almost wholly of the labouring class, and it is essentially a scattered population. Near to the church on the east of the parish there is some considerable aggregation of dwellings constituting the "village." Here 30–40 houses are spread for several hundred yards along two converging highways, on one side only of each highway. Again, at Dawney's Hill, north of the village, and about ¼ mile distant, is another and smaller group of cottages near the national school. But generally the houses of Pirbright, occurring singly or in very small groups, are dispersed over several miles of country. The sanitary circumstances of the parish may be deemed above the average. Few dwellings are overcrowded, and almost without exception they have garden ground or other ample space about them. This, while sufficing for utilization (in each instance on the premises) of slop drainage and privy contents, has generally admitted of the tolerably safe disposition of the pit privy in reference to the dwelling and to the surface well which exists in most gardens. Recently the sanitary authority by adoption of watertight tanks for the collection and storage (in each instance away from the house) of slop refuse, has still further diminished risk to surface wells—such as had before arisen by careless people casting foul slops on the ground near to wells. These matters have a bearing on the subject of inquiry as tending to show that there is not in the physical and sanitary circumstances of Pirbright any ready explanation of the diphtheria: that, for instance, from the wide dispersion of dwellings, households have had, for the most part, but little intercommunication, while as regards other sanitary circumstances, they are commonly exceptionally distinct and separate one from another.

Upon becoming associated with Mr. Smith, I quickly learned that, in addition to definite diphtheria, there had been in the parish a large prevalence of sore throat, much of which had not come under medical observation, and that commonly persons who had had what they or their parents regarded as trivial sore throat, suffered later on from paralyses of the sort that are apt to follow diphtheria. This had been specially noticeable in regard of school children, and Mr. Hill, the schoolmaster, was able to cite many children (some not known to have been ill at all) who, on their reappearance at school after one or another of the intervals of school closure, could hardly see large print, or had difficulty in articulating intelligibly. It became obvious, therefore, that inquiry would be incomplete that did not, beside diphtheria, take account of minor sore throat, and that a house-to-house inquiry was requisite for ascertaining more precisely what had been occurring in the parish. This was accordingly undertaken, and has included almost all the houses in the place, and, in addition, some half dozen houses that, although in other parishes, belonged geographically to Pirbright. This census sought information as to circumstances of escape as well as those of attack, and it therefore took account of the inmates of each house, their several ages, whether or not they had suffered illness, and got together full particulars of the date of attack, gravity of illness, school attendance, and the like, of individuals suffering from diphtheria or sore throat. Inquiry of this had not proceeded far before it became evident that children had suffered disproportionably to other persons, and that the diphtheria which had largely prevailed in the parish in May and April had had its beginning there in March, February, or even January. Special investigation of the circumstances of the earliest sufferers sufficed to show that useful information respecting the origin of the disease was not now to be had. The first cases could not be satisfactorily accounted for. Nothing in the sanitary circumstances of their houses served to explain them; moreover, they were widely separated, and their families, seemingly, were not acquainted with each other. This much may, however, be said: the residences of some of the earliest cases were in the northern part of the district which adjoins Chertsey Union, where, and notably at Bisley, a very short distance from Pirbright, diphtheria had prevailed at the end of 1881 and at the beginning of 1882. Upon the whole it was likely that the Pirbright outbreak had been related, in a fashion that had become obscured, to the Bisley diphtheria; but however this may have been, all that now seemed feasible was examination of the conditions of extension of the disease in Pirbright. This, in view of the special incidence on children, has been mainly inquiry as to the part played by the school in the spread of diphtheria.

The broad results so far of my inquiry are summarised in Table I. It gives for each of nine periods the circumstances of Pirbright school (whether open or closed), and the incidence of diphtheria and sore throat on houses and on persons at different ages in the parish.

The term diphtheria in that Table includes all cases so designated by the medical man in attendance, and as well cases of sore throat which inquiry showed had been followed by sequelæ, such as are commonly associated with diphtheria. Sore throat, on the other hand, is used to denote sore throat not followed by paralysis, but occurring for the most part in families invaded by definite diphtheria. Henceforward, in this report it will be convenient to include both diphtheria and sore throat under the one term "throat illness."

App. A. No. 8.

On Diphtheria in Pirbright; by Mr. Power.

Table I.

Period.*	Pirbright School open or closed.	Houses newly invaded.	Persons attacked.				Total Cases.	Cases afterwards fatal.
			Children under 15 years.		Other Persons.			
			Diphtheria.	Sore Throat.	Diphtheria.	Sore Throat.		
1 January to 1 April (13 weeks.)	Open - -	4	6	2	—	—	8	—
1 April to 20 May - (7 weeks.)	Open - - (Closed 16 May.)	14	23	6	3	3	35	3
20 May to 1 July - (6 weeks.)	Closed - - (Reopened 27 June.)	9	11	3	4	3	21	1
1 July to 22 July - (3 weeks.)	Open - - (Closed 13 July.)	7	9	2	1	—	12	3
22 July to 2 Sept. - (6 weeks.)	Closed - - (Reopened 28 August.)	3	1	1	3	3	8	—
2 Sept. to 30 Sept. - (4 weeks.)	Open - - (Closed 26 Sept.)	6	4	1	2	—	7	1
30 Sept. to 11 Nov. (6 weeks.)	Closed - - (Reopened 6 Nov.)	4	1	1	2	—	4	—
11 Nov. to 25 Nov. (2 weeks.)	Open - - (Closed 21 Nov.)	3	3	1	—	—	4	—
25 Nov. to end of Dec. (5 weeks.)	Closed - -	2	—	2	2	3	7	—
52 weeks.	—	52	58	19	17	12	106	9

* Calendar weeks are here taken in each instance to the end of the week in which the change noted in Column 2 was made.

Two points of interest are developed by this Table I., viz., the distribution of throat illness in time and its incidence on children.

As to time. Passing over the first period, during which diphtheria was acquiring a hold on the parish, we come to compare the seven weeks ending May 20, during which the school was open, with the following period of six weeks (ending July 1) during which it was closed. The weekly number of attacks declined between the two periods; and declined only among children under 15 years old. The school was now re-opened for three weeks, and in that period the weekly attacks became again more numerous, becoming so solely among children under 15. The school being again closed for six weeks, the weekly attacks among children fell almost to the point of disappearance of the disease among them, but new cases occurred among older persons. During the last four months of the year, the school has been twice again opened and twice again closed, with some corresponding fluctuations (smaller in actual amounts) in the appearance of the disease, suggesting a relation between the work of the school and the occurrence of the throat illness, and between the suspension of the school work and the disappearance of the throat illness. Upon the whole, the facts thus far by no means exclude influence of the school on the later behaviour of throat illness in the parish, though they admit of a suspicion that school influence may have been subordinate to some other and more general influence operating through the parish, alike in kind though different in degree, upon children and on other persons.

The incidence of the throat illness on children under 15 years seen in the table is striking, and for the reason that "children under 15"

includes all children habitually attending school, may seem hardly to require us to hesitate about connecting the disease with the school. Indeed upon very similar evidence schools have, ere now, been believed to have been the sole propagators of diphtheria. But diphtheria, as is now well known, is notably prone to attack children, and especially children at ages 3–15, which are beyond all others the school-going ages. Such children are, in point of fact, far more susceptible of the disease than babies and older persons. Hence evidence of the above sort is not by itself of much value as proving school influence in dissemination of the disease.

Accordingly, in the present instance, the incidence of the throat illness upon children has been studied in considerable detail in the houses of the parish, with the result of finding as usual large immunity from the disease of babies under three years; and much time has been spent in attempting to differentiate between mere age influence at ages 3–15 years, and any influence that may have been special to the school. Especially has information been sought as to whether among certain divisions of the parish (made for the purpose of this inquiry, all of which sent many children to school) there had been any notable differences in the local incidence of the disease on children at 3–15 such as might serve as a starting point for further inquiry. But no such differences have been found.* Throat illness, so far as such children have been concerned, seems to have affected all divisions of the parish pretty uniformly, and at much the same time, nor are there any notable differences in the duration of the prevalence of the disease in the several sub-divisions. These facts are shown in Table II., where the incidence of throat illness per cent. of each class referred to is printed in italics.

Accepting, then, as a fact that a special incidence of throat illness on children at the more susceptible ages in Pirbright has uniformly obtained throughout the parish, the question arises, how far has this been due to mere age as conducing to attack, and how far to difference of exposure, whether at school or elsewhere, of such children to a cause of diphtheria? For answer to this question a standard of comparison is wanted, and that afforded by the behaviour of throat illness toward *persons of various ages in the families that had become invaded* may perhaps suffice. In 50 such families in Pirbright, there were, exclusive of the first sufferers, 251 persons living in the presence of diphtheria subsequent to its introduction into the house; so far as the disease may have had its origin on the premises, exposed to such influences as may have caused the disease in the original sufferers; so far as the disease is infectious, living in the same room, sleeping in the same or in the next room; parents nursing children, children tending one another, all presumably under circumstances of free and sustained exposure to the infection of the disease. Among these 251 persons there were—

Living at ages	0–3	22, of whom	2	were attacked, or	9·0	per cent.
„	3–12	59, „	23	„	38·8	„
„	12–15	22, „	7	„	31·8	„
„	over 15	148, „	20	„	13·5	„

So that under the circumstances of these families actually invaded, children at ages 3–15 suffered three or four times more than babies and older persons, and children 3–12 to a somewhat greater extent than other children.

* Amongst the several groups thus formed of children 3–15 years old, there were, as regards children at the more advanced age of 12–15 years, certain obvious differences of incidence of throat illness (*see* Table II.); but the numbers dealt with, in each instance were so few as to be altogether untrustworthy.

Table II.

Locality.	Bearing with reference to Village.	Distance from Village.	Houses.		Persons, all Ages.		Persons at Ages:—									
							0–3		3–12		12–15		15–20		20+	
			Total.	Invaded and Dates.	Total.	Attacked.	Total.	Attacked.	Total.	Attacked.	Total.	Attacked.	Total.	Attacked.	Total.	Attacked.
		Miles.														
Village	—	—	36	March 2 May 1 July 2 Aug. 1 Sept. 3 Oct. 1 } 10 *27·7*	160	22 *13·7*	14	1 *7·1*	28	13 *46·4*	7	2 *28·5*	24	3 *12·5*	87	3 *3·4*
Dawney's or Boro' Hill.	N.	¼	17	Feb. 1 April 1 June 2 Sept. 2 Nov. 3 } 9 *52·9*	74	19 *27·0*	5	1 *20·0*	25	10 *40·0*	5	3 *60·0*	2	1 *50·0*	37	4 *10·8*
West Heath	N.W.	¼–½	16	May 3 June 1 July 1 Aug. 1 Sept. 1 Oct. 1 } 8 *50·0*	87	16 *18·3*	12	1 *8·3*	20	9 *45·0*	3	1 *33·3*	8	2 *25·0*	44	3 *6·8*
Cowshot and Primley.	N.W.	1–2½	18	Jan. 1 April 1 May 2 July 1 } 5 *30·0*	92	15 *16·3*	6	— *0·0*	22	10 *45·4*	8	2 *25·0*	8	1 *12·5*	48	2 *4·1*
Duchies	S.W.	1–3	28	April 2 May 3 June 2 Nov. 1 Dec. 1 } 9 *32·1*	121	16 *13·2*	11	— *0·0*	25	9 *36·0*	10	3 *30·0*	9	— *0·0*	66	4 *6·0*
Collins Green and Hogley.	S. & S.E.	½–2	29	April 1 May 1 June 3 July 3 Aug. 1 Nov. 1 Dec. 1 } 11 *37·9*	156	18 *11·5*	4	— *0·0*	28	10 *35·7*	13	2 *15·3*	27	3 *11·1*	84	3 *3·5*
Whole Parish	—	—	144	Jan. 1 Feb. 1 March 2 April 5 May 10 June 8 July 7 Aug. 3 Sept. 6 Oct. 2 Nov. 5 Dec. 2 } 52 *36·1*	690	106 *15·3*	52	3 *5·7*	148	61 *41·2*	46	13 *28·9*	78	10 *12·8*	366	19 *5·1*

These several per-centages 9, 38, 32, and 13½, may be taken as expressing the relative proclivities to throat illness of one and another age-period, under *equal* circumstances of exposure; and we are now in a position to consider the relative incidences actually observed in persons of one and another age under circumstances of life in non-infected houses in Pirbright; and to examine the indications that may appear whether children at ages 3–15 have or have not been exceptionally exposed to the operation of the causes of throat illness. Obviously in proceeding to this examination we have to take account solely of *first*

attacks in families and of no subsequent attacks. Now in Pirbright there were persons living—

At ages	0–3	52, of whom	1	was a first sufferer.
„	3–12	148, „	37	were first sufferers.
„	12–15	46, „	5	„
„	over 15	444, „	9	„

And the several percentages on these ages were 1·8, 25, 10·8, and 2. Thus, while a throat illness was but seldom introduced into the family by the baby or by the grown-up members of the family, it was brought by the child of 3–12 not very much less often than it would have been brought if the child had been living in an atmosphere of persons infected by throat illness. And this difference between the child of 3–12 and other persons is found, after all due allowance has been made for the differing susceptibility of various ages to contract the illness. The child of 3–12 years, therefore, has for some reason or other apart from its age been the child to get the disease and to take it home to the family that has hitherto been free from it. The next question to be decided is, what has been the influence specially affecting children of this age.

This special influence can hardly have been other than some condition or conditions involved in the process of school going. For, as has already been shown, all parts of the parish have alike been affected by throat illness, and this mainly in the persons of their children, and the several parts have had few conditions in common except it has been school attendance; moreover, in each division of the parish the speciality of the incidence of throat illness has been on children 3–12, which are the chief school-going ages; infants under 3 years not having attended school at all, while children above 12 and under 15 years have attended in small numbers and less uniformly. No doubt enough has been made out to show in a general sort of way school influence; nevertheless, it has been thought desirable to examine the question further, and in some detail, with a view of learning more precisely what has been the value of school influence in determining the results observed. To this end, by help of the schoolmaster, Mr. Hill, note has been made in regard of each period of school operations of the school attendance of each child in the parish; and the incidence of throat illness on children 3–12 at school and not at school, and on other persons, has been studied in each period of the school operations. Similarly, the facts of incidence of throat illness have been studied for each period of school closure. For it was seen that the total influences causative of throat illness, though they might be a diminishing, were probably a varying quantity; and that in successive periods, the total children, and as well other persons, not yet attacked, was a gradually diminishing number. So also it was seen that not only did the number of children at school and not at school vary in different periods of school operations, but that it varied also, according as school was open or closed, within totally different limits; for instance, children (speaking only of children not yet having undergone attack) at school might in separate periods be nil or they might number 100, while children not at school were rarely below 40, but could in periods of school closure be above 100. In making investigation on the above lines, regard was had to the necessity for distinguishing between first sufferers and after sufferers of their families, when estimating school or other influences; and in order that the school should not be unduly credited with cases that might possibly have got their infection just before school reopened, some slight re-arrangements of the groups of weeks constituting the several periods was adopted. The result is embodied in Table III. where rates are, as before, printed in italics.

App. A. No. 8.

On Diphtheria in Pirbright; by Mr. Power.

Table III.

Periods.	Pirbright School.	Children at Ages 3–12.									Other Persons.			
			At School.				Not at School.							
		Children not recently attacked at beginning of period.	Total not recently attacked.	Newly attacked.	First Cases in their Families.	Secondary Cases in their Families.	Total not recently attacked.	Newly attacked.	First Cases in their Families.	Secondary Cases in their Families.	Total not recently attacked.	Newly attacked.	First Cases in their Families.	After Cases.
January to 27 May. (*21 weeks.*)	Open (closed 16 May.)	148	96	28	16 *16·6*	12	52	6	2 *3·8*	4	496	17	1 *0·2*	16
27 May to 8 July. (*6 weeks.*)	Closed (reopened 27 June.)	114	–	–	–	–	114	12	9 *7·8*	3	479	7	2 *0·4*	5
8 July to 22 July. (*2 weeks.*)	Open (closed 18 July.)	102	62 *[6]*	5	3 *4·8*	2	34	–	– *0·0*	–	472	1	1 *0·2*	–
22 July to 9 September. (*7 weeks.*)	Closed (reopened 28 August.)	97	–	–	–	–	97	2	–	2	471	6	3 *0·6*	3
9 September to 7 October. (*4 weeks.*)	Open (closed 26September)	95	56	4	4 *7·1*	–	39	1	1 *2·5*	–	465	2	1 *0·2*	1
7 October to 11 November. (*5 weeks.*)	Closed (reopened 6 November.)	90	–	–	–	–	90	–	–	–	463	4	4 *0·8*	–
11 November to 2 December. (*3 weeks.*)	Open (closed 21November.)	90	48	3	2 *4·1*	1	42	–	– *0·0*	–	459	4	2 *0·4*	2
2 December to end of December. (*4 weeks.*)	Closed	90	–	–	–	–	90	–	–	–	455	4	1 *0·2*	3

* The figure 6 in brackets are children regarded for present purposes as having got infected in the preceding period of school closure, though they were taken ill while attending school at the end of June or beginning of July. Hence 6 has been subtracted from 68, and the rate for this period of school operations has been taken on the remaining 62.

The facts of this table, in their general bearing, accord with those of Table I. so far as they admit a probability that school influence has not been the only influence causative of throat illness in Pirbright. But seemingly it has had a larger share in the throat illness, at any rate in the attack of children at later periods of the epidemic, than from Table I. appeared likely. For Table III. shows that attacks of throat illness at ages 3–12, occurring among such children first of their respective families, were in two ways related to school. In uninfected families, children of this age who at a given period were attending school, became affected by throat illness five or six times as numerously as children of the same age who at the same period were not attending school. And this was observed on every occasion when the school was open and the opportunity for comparing the two existed. While the school remained open in the early months of the year, the rate of attack in children 3–12, presumably susceptible of diphtheria but not having the disease at home, was 16·6 per cent. of those who were at school, 3·8 per cent. of those who were not. The next time the school was open, the respective rates were 4·8 and 0·0; the third time, 7·1 and 2·5; and, on the November occasion, 4·1 and 0·0. The numbers upon which these percentages are based are indeed small, but on the other hand the indication which they furnish is too uniform to be mistaken.

Going into the facts of Table III., with the object of stating the incidence of throat illness in the given group of children at periods when the school was open in comparison with periods when it was closed, it is found that comparative statement is not to be made numerically:—

The periods in question were not of similar length; the children who stayed at home only because the school was closed, taken with the children who never went to school at all, made up a variable which did not lend itself to examination; while the watchfulness for cases of minor throat illness, exercised by teachers when the school was open and wanting at periods of school closure, introduced a further variable that interfered with comparison of total throat illness at one and the other time. Thus during my inspection it would happen that illnesses learnt through school records were not remembered by parents, until some school recorded fact was brought to their recollection. Fortunately there was no example of this last kind to vitiate comparisons invited by the table which follows.

Such facts of Table III., however, as are concerned in the above comparison, admit of being stated in the form of a new table. Accordingly, I show in Table IV., what was the occurrence of throat illness among this particular class of the Pirbright community—children, aged 3–12, who had no infection at their own homes—during periods of school closure and school work respectively. In this table, by omission of the first period of regular school operations (for reasons that will be readily apparent), seven periods, each of a few weeks, come under review; and sufficiently valid comparison may be made between the four periods when the school was closed and the three periods when it was tentatively re-opened.

Table IV.—Showing in regard of periods of school closure and of school operations subsequent to culmination of the outbreak, the facts as to ascertained occurrence of first attacks of throat illness among children in Pirbright at ages 3–12 years.

Limits and Duration of Period.	Operations of School.	Children 3–12 (first sufferers of their families) attacked in the several periods.		
		Age and Date of Attack.	Nature of Illness and Result.	School Attendance.
May 17th to June 26th (41 days.)	Closed	5 years, May 26	Diph. slight, recovered	Never to Pirbright School.
		4 years, June 10	Diph. slight „	„ „
		4 years, June 11	Diph. „	Never to School.
		11 years, June 13	Diph. severe „	Not to school since 16 May.
		3 years, June 23	Scarlatinal diph. „	Never to school.
June 27th to July 18th (17 days).	Open	11 years, June 29	Diph., died	To school until 2 July.
		6 years, June end	Sore throat, recovered	To school until ill.
		10 years, July 4	„ „	„ „
		4 years, July 6	Diph., died	„ „
		7 years, July 7	Diph., died	„ „
		7 years, July 13	Diph., died	„ „
		6 years, July 15	Diph. slight, recovered	„ until 13 July.
		6 years, July 15	„ „	„ „
July 14th to August 27th (45 days).	Closed	—	—	—
August 28th to September 26th (30 days).	Open	5 years, Sept. 18*	Diph. very slight, recovered.	Not to school since mid. July.
		7 years, Sept. 21	Diph. died	To school until ill.
		5 years, Sept. 23	Diph. slight, recovered	„ „
		5 years, Sept. 24	Throat illness „	„ „
		9 years, Sept. 25	Diph. very slight „	„ „
September 27th to November 5th (40 days).	Closed	—	—	—
November 6th to November 21st (16 days).	Open	7 years, Nov. 12	Diph., recovered	To school until ill.
		6 years, Nov. 14	Diph., „	„ „
November 22nd to December 31st (40 days).	Closed	—	—	—

* This was an only child, aged 5 years, living in the village. She had not been at all to school since mid July, and no cause could be assigned for her illness. Nor could any association of later cases with this child be established, such, for instance, as might help to explain their subsequent attack.

In view of the above facts, no doubt can be entertained that the conditions of school attendance have played an important part in the speciality of the incidence of grave illness on children 3-12 in Pirbright. It is not of course intended to say that the school influence was the only factor of throat illness at that age; there may perfectly well have been some other factor operating for a while over the whole district, and upon persons of all ages.

There remains for special consideration the question,—in what has school influence consisted?

Two sets of school conditions may be thought of as competent for the results observed:—(1.) General conditions, physical or sanitary, of the school building or of its neighbourhood, and belonging therefore to the school or to the locality of the school; and (2.) Circumstances personal to children attending school, and contributed or conveyed therefore to the school by the children themselves. And in either case be it noted the speciality of operation on children might have been subordinate to some other and original fact of diphtheria.

I. The physical and sanitary circumstances of the school and of the school locality seem to demand special notice inasmuch as they comprise a variety of conditions (all of which have before now been regarded as competent for diphtheria production) that might possibly be in some sort differentiated from like circumstances in other parts of the parish. And any differentiation of a decided sort between such circumstances in and about the school, and in other localities of the parish, might be of importance as tending to explain not only the circumstance of the outbreak having begun upon children, but the sustained incidence also of the throat illness on children attending at the school. But nothing definite in this sense has been made out. The school is a modern building in the erection of which unusual forethought seems to have been exercised. It stands alone on a sand eminence, and is distinct in its sanitary circumstances from the houses of the locality in which it is placed. The slop drainage of the master's house, and of the school lavatories is drained away to a cesspool in a garden many yards distant from the school, and no part of the interior of the building has connexion with this drain; all sink and lavatory pipes are conveyed outside and terminated over trapped drain inlets. Excrement disposal is by earth pails, which are well kept. Up to last May the children's closets were at the back of the lavatory outbuilding adjoining the school; but on occurrence of diphtheria they were, for additional safety, removed to the further side of the playground. The well which is in the master's back yard seems exceptionally safely placed and cared for. Thus it appears that in all the matters referred to, school conditions have differed from other conditions of like sort in the parish only in being better ordered and administered. And therefore it is difficult to believe that anything in the sanitary circumstances of the school can have had any essential part in the production and maintenance of throat illness among the scholars. Nor did I get any suggestion of relation of food or dress or washing to the prevalent disease. So, too, with reference to the sanitary circumstances of the locality (Dawney's Hill, of Table II.) in which the school is situate, there is nothing at all suggestive of relation between matters of this sort and the diphtheria. They differ in no essential particular from those of other localities into which the parish has been divided; and, except in the matter of a common atmosphere, there can hardly have been community of condition for the school and for houses in its neighbourhood. Nevertheless, it has to be noted as at least singular that this Dawney's Hill locality has suffered from

throat illness and diphtheria to a greater extent and for a longer time than other localities, and that five-ninths of its first sufferers had not at the date of their seizure recently attended the school.

II. Among conditions causative of throat illness that may have been contributed to the schools by the children themselves, personal infectiveness of children attending the schools is the only one which past experience would suggest for consideration. This, if it could be affirmed for each period of school operations, would, in view of the undoubted communicability of diphtheritic disease, go far to explain what has occurred among school children; and the question therefore arises how far can personal infectiveness have operated at the school.

In attempting an answer, we may first think of the school at a time of re-opening after having been closed on account of sickness. Generally, during such periods of school closure, much care was exercised toward effectually getting rid of infection. Not only was the school building and its contents thoroughly cleansed and fumigated, but disinfection of dwellings and clothing of persons that had been attacked was diligently practised in all instances. And on each occasion of re-assembly of the school (and re-assembly of the school was not permitted until no diphtheria had for several weeks occurred in the parish), children that had suffered were excluded until they could be pronounced completely recovered from their throat affection. Then, as regards times of active school work, so far as diphtheria and graver throat illness are concerned, it is not likely that convalescent children did in fact so return to school with their original infection about them as to give disease to fresh children; and more particular examination of the school records, with the inquiry of the parents, suffices to prove that few, if any, persons suffering from diphtheria or notable throat illness did so attend within five or six weeks of their seizure. Unless, therefore, persons afflicted by diphtheritic neuroses are to be regarded as infective, it may be doubted whether diphtheria infection has again and again been introduced to the school by children convalescent from that disease. In the third place, the evidence as to possible introduction to the school of infection by children incubating or developing diphtheria is on the whole negative. Perhaps this may have occurred in the July period, when a girl, regarded as attacked 29 June, two days after re-assembly of school, continued to attend school until 2 July; it is, however, doubtful. This child, although indisposed as early as 29 June, did not have, it is confidently affirmed, any sore throat at all until 3 July, and there is ground for believing this to have been the true date of beginning of her fatal illness. If this may be believed, then, in this instance as on other occasions of re-assembly of school, the diphtheria seizures occurred so nearly together that the existence of a cause common to the several cases would account for the early July attacks even better than a hypothesis that one case had been derived from the other.

But even if we should assume that infection from case to case by diphtheria did really take place on each occasion of resumption of school operations, an important question remains wholly unanswered. On none of these occasions, be it observed, is diphtheria or grave throat illness recognised as having occurred among children in Pirbright for some weeks before re-opening of the schools, and such illness, if it had occurred, could hardly have escaped notice. Yet, no sooner does school re-assemble than diphtheria, and commonly fatal diphtheria, re-appears among school children. Whence, then, came on each occasion of re-assembly of school, the assumed initiatory case of diphtheria? If arising by personal infection, from whom did this first case take the disease?

And if not from an antecedent case of diphtheria, by what sort of case did this sufferer get infected?

Apparently, there is no sufficient answer to these questions in considerations arising from what has been noted elsewhere, viz., that trivial sore throat may, by what has been termed a process of "progressive infectiveness" operating through several individuals successively, give rise ultimately in other persons to attacks of true diphtheria. At Pirbright it is likely enough that trivial sore throats designable as "cold," though few can now be heard of, existed among children on each occasion of their re-assembly at school, but there is no evidence of progressively increasing gravity of the earlier cases, if indeed there was time for the process. On the contrary, with startling suddenness, multiple cases of diphtheria, and fatal diphtheria, promptly occurred on each occasion of re-opening the school; and cases intermediate in gravity between these diphtheria cases and the "colds" that on the above hypothesis gave rise to them, are not, except perhaps in the July period, to be found. No satisfactory explanation of this behaviour of the diphtheria is forthcoming.

This investigation has failed, therefore, in giving definite reply to the main question as to the nature of the school influence. Nor can any beyond speculative answers be made to other questions that may be thought of as arising from it. As for instance:—How far and in what direction would the later behaviour of diphtheria in Pirbright have been modified had the school been closed in the first instance at an earlier date? and again, What would have happened if the school had not been closed at all?

In bringing this report to a conclusion, mention may be made of certain facts in the natural history of diphtheria that came under notice during this inquiry. These, though they may not be new, have interest in regard of the story that has been told. In our investigation of the incidence of throat illness upon families, Mr. Smith and I were struck, and independently of one another, by the apparently different ability of the disease in one and another instance to extend itself in families invaded. Not unfrequently severe and fatal diphtheria appeared destitute or well-nigh destitute of power to infect other children living along with it, while on the other hand cases of very trivial sore throat or "colds" that were not perhaps heard of (except by close questioning) often preceded and were seemingly responsible for after-occurrences of true and fatal diphtheria in the family. Especially was this apparent capacity of mere sore throat for breeding malignant diphtheria noticeable in regard of families comprising many young children. In such families severe or fatal cases of diphtheria tended to occupy a position midway in a series of attacks that began as sore throat and ended in similar fashion. And further, we got a suspicion, though the instances were too few to justify any conclusion thereon, that, given the occurrence about the same time of two or more cases of trivial sore throat among children of a large family, such occurrence was likely to be quickly followed by severe diphtheria attack in one or more children of that family. This suspicion may like enough be hereafter proved invalid; it is only noteworthy as having arisen before the facts as to the behaviour of diphtheria in that larger family, Pirbright School, had been got together and formulated.

No. 9.

Report by Mr. W. H. Power, on an Outbreak, in certain Districts of London, of Scarlatina believed to have been distributed in Milk: with Postscript recording certain Experiments by Dr. Klein, F.R.S.

In a letter dated 2nd February 1882 the clerk to the St. Pancras Vestry reported an outbreak of scarlatina in the southern part of that parish, and he stated that inquiry by the Vestry's sanitary department tended to show that the disease was traceable to the milk service of a particular dairy business situated in the neighbouring district of St. Giles, and getting its milk supply from a certain farm near Farnham in Surrey. Further, and on behalf of his Authority, the clerk requested that the Board would institute inquiry respecting the circumstances of the farm whence the implicated milk had been derived. Accordingly I was instructed by the Board to confer with the Health Officers of St. Pancras and St. Giles with a view of getting information respecting the outbreak and the circumstances which had appeared to connect it with the particular milk supply. Afterward, in the event of a relation becoming apparent between milk and the outbreak of scarlatina, I was to set myself to find out the source of infection of the milk.

In the following pages I propose to tell briefly the history of the outbreak, using, in addition to materials collected by myself, observations made for St. Pancras and St. Giles by the health officers of those districts before my inquiry commenced and afterwards in aid of my inquiry; and for other districts of London, availing myself of the assistance given me by their health officers. I propose subsequently to give an account of my inquiries at the milk farm and to pass on to some general considerations that appear to be of importance.

On the 14th January and following days there occurred a sudden and extensive outburst of scarlatina and throat illness in Russell Square and its neighbourhood. Prompt investigation of the outbreak by the Medical Officer of Health for St. Giles District (Mr. Lovett) showed that well-nigh all the cases of scarlatina and throat illness coming under notice between 14th and 30th January had occurred among the customers of a particular retail milkseller. And further it was ascertained on conference with the health officers of districts adjoining St. Giles, that scarlatina and throat illness had also prevailed at the same time among the comparatively few customers of this milkseller residing in St. Pancras, Marylebone, and other districts. Subsequently house-to-house inquiry in those parts of St. Giles and St. Pancras chiefly invaded showed that households getting, during the period in question, their milk supply from dairies other than that already referred to, almost wholly escaped illness. In a word, there is abundant evidence that milk from the particular dairy was in the latter half of January concerned in a sudden and widespread dissemination of scarlatina and throat illness.

Very early in the outbreak, indeed as soon as his suspicions respecting the milk-causation of the illness were aroused, Mr. Lovett obtained from the particular milkseller a complete list of his customers, and at once subjected to a very rigid medical examination the milkseller's family as well as the persons employed in his milk business. He found that with the exception of a milk carrier named Cook none of these persons had recently suffered from any indisposition of an infectious sort. The man Cook had, it appeared, suffered from sudden sickness and sore throat on

the evening of 14th January; next day 15th January, one of Cook's children developed a scarlatinal rash, and in a few days two others of his children fell ill with undoubted scarlatina. Cook, who was himself only indisposed for a few hours, continued daily at his work at the dairy until the 23rd January, when he was discharged from his employment. Mr. Lovett, though disposed to consider the man Cook as concerned in some way with infection of the milk at the dairy in London, proceeded, nevertheless, to inspection of, and inquiry at, the farm in Surrey whence the particular milkseller derived daily the 45 barn gallons of milk which constituted the whole of his supply. In carrying out this inquiry Mr. Lovett had the assistance of the Medical Officer of Health and of the District Medical Officer of Farnham, the district in which the farm is situated. This visit of inspection took place on 27th January, and its result was altogether negative. No scarlatina could be heard of as having occurred at the farm, or within several miles of it, for several months, and examination of the farmer's family and of persons employed about the farm and their families failed in getting suggestion that any of these persons had suffered recently from even trifling illness that might have been of scarlatinal nature. Further examination of the cows and other animals at the farm by certain veterinary surgeons of Aldershot resulted in a certificate that the animals were free from trace of illness of any sort.

Thus the matter stood when I was instructed to make inquiry respecting it.

My first concern was necessarily to examine the evidence implicatory of the particular dairy in St. Giles; and having satisfied myself that there was good ground for believing this milk to have been the cause of the outbreak, my next step was to ascertain, if possible, *where* and *how* this milk had acquired infectious property.

Upon examination of the details of the distribution of the paticular milk service, it soon appeared that certain (though comparatively few) of the dairyman's customers had their milk delivered to them from the dairy cart which conveyed the total milk supply of this dairy from Charing Cross Railway Station (whither it was consigned by the farmer) to the particular milkseller's place of business in St. Giles. These customers, therefore, were served with milk that had never entered the milk-shop in question and which had not come into any relation with the man Cook who, as has been seen, suffered on 14th January from throat illness. Certain of the households thus supplied suffered from scarlatina or throat illness; and they suffered simultaneously with the man Cook and his family, and simultaneously also with those other persons in St. Giles and St. Pancras who, like Cook, had been served with milk from the St. Giles dairy-shop. This fact tended to show that the particular milk, or at least a portion of it, was infectious before arriving on the premises of the St. Giles's milkseller. And soon this view got abundant confirmation. It was ascertained that other milk from the Surrey farm besides the 45 barn gallons supplied to the St. Giles dairy had also been distributed in London. Twenty barn gallons daily of milk from this farm had been supplied *viâ* the South-western Railway to a particular dairy in Peckham whence it had been, along with milk from other sources, distributed in the Camberwell district. And in Camberwell scarlatina and throat illness among customers of the particular Peckham dairy were found to have occurred coincidently with the outbreak of similar illness in St. Giles and St. Pancras. Of 39 cases of scarlatina coming under the notice of the Camberwell Medical Officer of Health in households invaded between 14th and 30th of January no less than 32 (82 per

cent.) were persons getting their milk supply from the particular Peckham dairy. Further, there was independent evidence of the milk from the Farnham farm having been infectious on its arrival in London. At the Waterloo Terminus, where was received the consignment of milk from this farm to the Peckham dairy, servants of the railway company are not permitted to purchase milk arriving at the station; but at Charing Cross, where the consignment for the St. Giles dairy was received, purchase of milk by the railway servants is not prohibited. Thus it chanced that certain of the South-eastern Railway servants had habitually purchased milk from the St. Giles dairy carman as soon as it had been delivered to him. A varying quantity of from two to three imperial gallons of the Farnham milk was thus distributed daily at Charing Cross, and of purchasers of this milk 13 persons in six families were attacked by scarlatina or throat illness about the same time that customers of the particular dairies in St. Giles and Peckham were similarly invaded.

Upon the whole, therefore, the conclusion became irresistible that this milk, delivered from the farm at two separate country stations, belonging to different railway companies, for consignment to separate London termini, and distributed in widely separated metropolitan districts where it caused simultaneous outbursts of scarlatina and throat illness, had become infected at the farm whence it was derived. Accordingly, attention was given to means whereby it might have become infected at this farm.

Inquiry to this end necessarily traversed ground already gone over by Mr. Lovett, and it further took into account a variety of additional circumstances that might be hoped to assist in throwing a light on the subject. Into the various steps of this investigation I will not now enter, but will briefly state its outcome. I satisfied myself that it was practically out of question that the milk at the farm had become infected in any of the commonly-believed ways that require a human subject as the source of infection; and I think it altogether unlikely that commonplace fouling of dairy utensils by polluted water or the like, after such fashion as has heretofore served to account for specific pollution of milk, can have here occurred. In the end I found myself, as on a former occasion, called upon to face the question whether or not actual cow-conditions might have been competent for the results observed; and in considering this question I came to see that a hypothesis of cow-causation would fit the facts that needed explanation as well as, or even better than, any other hypothesis. If only it could be believed that a single cow of this herd of 60–70 cows had been for a limited time capable of affording specifically infected milk, there was nothing in the routine of the farm dairy arrangements inconsistent with the milk of such single cow having been distributed among the churns consigned from the farm to London; and this in such a manner as to infect simultaneously the milk service of each London dairy supplied from the farm, and during a certain limited period a considerable proportion of that service.

At this stage of my thought on the subject, I took the farmer into confidence and got him to consider with me whether *any new condition* could have entered into his business about the second week in January, and if so, what the nature of it could have been. On reference to his books we found that one of his cows due to calve on the 27th December had calved subsequently to but within ten days of that date, and had come into milking for business purposes three or four days after calving. So far as we could judge this calving constituted the sole new element

introduced into the milk business of the farm for a considerable period before the milk became infective. Certainly, with this exception, no cow came freshly into milk between mid-November and the end of January. Respecting the health of the particular cow the farmer could say nothing, except that he had not heard of her having had any ailment, while the cowman who had charge of this and of ten other cows professed to be unable to remember the date and particulars of her calving; he even failed to recollect the sex of the calf produced by her. Upon examination of this cow on the 11th February I noted that she had here and there lost portions of her coat, and that her buttocks and posterior udder were fouled and stained by excremental matter, and perhaps by vaginal discharge as well. In this respect she presented a rather strong contrast to most of the other cows.

In this instance then as in similar outbreaks of scarlatina, wherein milk has been undoubtedly the means of dissemination, there has been failure in tracing the source and method of infection of the milk; and this in spite of a great deal of careful and prolonged investigation of the circumstances both by myself and others. It is of course possible that the failure is due to mere lack of evidence respecting occurrences that did actually take place after the milk left the cows and that were competent to have infected the milk in commonly accepted ways. But it is not because this is possible that I ought to decline consideration of other possible meanings of the failure, or that I should hesitate to look at some positive indications which arise as soon as there is seen to be probability that the milk was infected when it left the animal. These indications are indeed of some immediate interest and importance, since they would appear capable of being put to the proof by actual experiment.

Few physicians will be disposed to deny a relation between scarlatina and certain forms of febrile puerperal disease in women. The contagion of scarlatina introduced into the lying-in room has often and with reason been held responsible for "puerperal fever." It does not matter for my present purpose that there are other contagia having a similar power of mischief there.

Now, if it be true that there is one sort of relation between scarlatina and accidents of the puerperal state, another sort of relation becomes comparatively easy of belief; while there would seem nothing improbable in the further suggestion that all such relations would be qualified by the passage of a common contagion through the system of another animal.

Thus considered, the outcome of my inquiries at this Surrey farm may be not without significance. If scarlatina in man have other animal source than human source, it may be that one such source is the cow that has recently calved, a cow either not at all ill (except for her parturition), or not so obviously ill as to prevent her milk being used for human consumption. Milk of a recently delivered cow might become infective in more than one way. Either it might, as a secretion of the cow, contain infective matter that was circulating in the system of the cow; or else uterine and other discharges of the cow fouling her udder, might, by a careless milker, be mixed with her milk in the act of milking. For the purpose of testing the question here raised by experiment on animals, other than man, all that is required is, first, a healthy cow that has recently calved, and then a succession of cows suffering under one and another recorded ailment, special to the period after calving. Milk from such cows, on the one hand unsophisticated as it came from the udder, on the other hand mixed with one and another kind of vaginal discharge of the cow, could be used for feeding as well perhaps for throat inoculation of some lower animals, and among these young pigs would seem to be promising subjects.

In conclusion I would advert briefly to some facts which seem worthy of further consideration in this connexion.

(1.) In epidemic outbreaks, referred to milk as their cause, infectivity of the milk has commonly lasted a short while only. In most instances a week or ten days would comprise nearly the whole period during which the implicated milk can be believed to have done mischief. This circumstance accords with some cow-condition as the cause of the milk infection quite as well as, perhaps better than, with any other suggested cause. For instance and from our present view-point, a recently delivered cow would not be long ill, and certainly her uterine discharge would not be expected to continue many days.

2. Epidemic outbreaks among human communities, that have been traced to milk as their cause, have generally occurred in relation with cow-businesses that have had to do with the production of milk and milk alone. Such businesses do not manufacture butter or cheese, nor do they rear calves. Consequently their cows are apt, after having calved, to come almost at once into business use, even though they may have some trivial (in the opinion of those about the cow) ailment, not obviously affecting the quantity or quality of the milk rendered by the cow.

3. In the case of scarlatina, outbreaks due to milk have commonly been characterised by small mortality as well as by mildness of the disease induced. In many such outbreaks, and notably it was the case in the present instance, a considerable proportion of the sufferers have only had sore throat of little severity; and further, this milk-scarlatina has on this as on other occasions been little prone to spread to other persons. These facts, insignificant mortality of the disease induced, its mildness, its tendency to remain localised in the throat, and its small ability to extend itself to persons in relation with the sick people, may be thought of as not inconsistent with an infective cause, having (as in vaccinia) an animal, but not recently a human, origin.

9th March 1882.

Postscript, April 1883.

I have now to report that in pursuance of instructions, I have been in communication with Dr. Klein upon the subject-matter of the above report; and that Dr. Klein has made the following investigations as to relation between human scarlatina and bovine disease. He conducted two series of experiments; reporting on the first series 1st October 1882, on the second series 27th March 1883. One or two comments of my own are introduced into the story. The results appear to me to indicate that this line of inquiry is well worth pursuing further.

W. H. P.

First Series of Experiments.

Experiments on animals, Series I.

Dr. Klein sought to ascertain (1) whether the *lochial discharges* of a reputedly *healthy* cow could, when inoculated into, or administered along with food to, certain other animals, produce in them any obvious illness. Afterwards (2) he sought to learn whether any form of illness might be producible in a cow by inoculating and feeding the animal with scarlatinal matter derived from a human source. On observing any such illness, he sought to investigate its transmissibility from the cow to other animals.

Inoculation and feeding of animals with lochial discharge of a healthy cow.

1. These experiments failed altogether; they were as follows:—

(*a.*) Pigs, dogs, rabbits, guinea-pigs, mice, and rats, were fed and inoculated with lochial discharge, unaltered as it came direct from a

"healthy cow"; and similarly animals of the above sorts were fed and inoculated with lochial discharge that had been mixed with and left for a while in milk. None of these animals, however, developed any sort of illness. The animals experimented on were, says Dr. Klein, closely observed, and their temperatures taken twice daily. But in no case was deviation from the normal state of the animal observed.

Cultivation of matter of lochial discharge of healthy cow and subsequent inoculation of animal with cultivate.

(*b.*) Further, Dr. Klein cultivated artificially the lochial discharge from the same cow, and found that "organisms" grew copiously in the cultivation medium; and that the characters of these organisms differed according to the dates at which the lochial matters cultivated were taken from the cow. But inoculation of "animals" with these cultivated organisms failed in producing in the animals any illness.

Inoculation of cow with scarlatinal material.

2. Inoculation shortly afterwards of the same cow with human scarlatinal material produced some definite results.

(*a.*) Desquamated cuticle from a scarlatina patient inoculated into a healthy cow produced no illness; but

(*b.*) Muco-purulent throat discharge from a scarlatina patient inoculated subsequently into the subcutaneous tissue of the same cow (with simultaneous administration to the cow of a small dose of the same material poured down its throat) did produce in the cow distinct illness, as follows:—

Ten or eleven days after this inoculation and feeding there appeared at the inoculated point on the thigh of the cow a firm swelling, and in another day or two a similar swelling on the outer surface of the cow's right lower jaw. Each swelling quickly attained "the size of a small fist." That on the thigh softened, and subsequently, when lanced, discharged a quantity of offensive pus; that on the jaw did not soften, and in about a fortnight had disappeared. The temperature of the cow during the whole period that she was under observation did not show any marked alteration, but the animal grew very thin and miserable notwithstanding that she received abundant and good food.

Inoculation of pus from ? scarlatinally-infected cow into dogs.

(*c.*) *Transmission of the induced cow disease to another animal.*—Dr. Klein inoculated two dogs with pus from the above abscess of the cow. In each instance a minute speck of this pus was introduced into the subcutaneous tissue of the dog's thigh. *About four days* after inoculation one of the dogs developed in and about the seat of inoculation a great deal of redness along with œdematous and painful swelling, and these phenomena were preceded by a distinct rise of the dog's temperature. Movement of this animal's affected limb became greatly impeded, and the dog was for a time distinctly ill; an abscess formed at the seat of inoculation which opened spontaneously, and, after discharging for a time, quickly healed. The throat of the dog did not become affected.

Dr. Klein; conclusions on experiments in Series I.

From these experiments Dr. Klein entertains no doubt whatever as to his having by inoculation with human scarlatinal material, transmitted to a cow a distinct disorder, which disorder was further transmissible, by inoculation in infinitesimal quantity of pus from an abscess in the cow, to a dog. And he points out that the four days incubation period observed in the case of this dog is of especial importance. He lays stress on it for the reason that by no reasonable amount of ordinary pus can similar disorder be produced in dogs; and further he remarks that such disorder as may be produced in dogs by injection into their veins of ordinary pus promptly follows injection without any such interval as deserves the term "incubation period."

Second Series of Experiments.

On an Outbreak of Scarlatina in certain Districts of London; by Mr. Power.

Experiments on Animals, Series II.

These consisted in (A) repetition of the above experiment of transmission by inoculation to animals of human scarlatinal disease; and (B) of experiments (of the sort adopted in Series I.) made with the lochial discharges of an originally unhealthy but recently calved cow that had in addition been, immediately after her calving, inoculated and fed with muco-purulent throat discharges from a scarlatina patient.

Further inoculation of animals—heifers and dogs—with scarlatinal material.

A. (*a.*) On 21st October a healthy heifer (yearling) was inoculated with throat discharge from a case of acute scarlatina.

(*b.*) On 21st October a second healthy yearling heifer was fed with like material.

(*c.*) On 21st October a dog was inoculated with like material.

Up to 6th November (17 days) no change whatever was observed in the health of any of these animals.

(*d.*) Accordingly on this day, 6th November, both heifers were inoculated with large quantities of muco-purulent throat discharge from a case of acute scarlatina, and one of these heifers was in addition fed with such matter. Similarly the dog (*c.*) and another dog were inoculated with the scarlatina matter.

Not one of these animals became in the least degree ill.

[It is noteworthy that this experiment differs from experiment 1, series I., in that the bovine animals here used were not milch cows that had recently calved, but heifer yearlings. And the question promises to arise whether in this class of animal the parturient state is a condition more or less essential to the reception of the human scarlatinal infection. As regards dogs, let it be noted that Dr. Klein's previous success (series I., experiment 2 (*c.*)) in inoculating these animals was not obtained with human scarlatinal matter, but with matter of the induced disease of the cow.]

Unhealthy cow inoculated and fed with scarlatinal material.

B. Another cow was taken for observation that fed fairly, but had lost patches of its coat and was believed to be suffering from some such chronic bovine disease as tuberculosis. She calved on 25th February 1883. On the evening of that day muco-purulent throat discharge was obtained from a scarlatina patient at Fulham Hospital in whom the disease had somewhat passed the most febrile stage. This discharge was on February 26th inoculated into the subcutaneous tissue of the cow, and some of the scarlatina material was poured down its throat.

? Failure to infect cow with scarlatinal disease.

An abscess, the size of a hazel-nut, afterwards formed at the seat of inoculation, and the abscess broke and healed up soon.

[The effect upon the cow of this inoculation with human scarlatina was inconsiderable. But, in so far as it may be permitted to judge from the experiments of October 21st on the two healthy heifers, some condition peculiar to this cow must have been present for any result at all to have followed the inoculation. And this condition may either have been the fact of her parturition or else her previous ill-health. Comparing the present experiment with that made on the healthy cow of the first series, there is enough similarity of result to suggest afresh that the purturient condition was that which contributed to the production of abscess in the present cow.

As regards any conclusions which may be deducible from the results which I have now to record, as obtained by inoculating various animals with the discharges of this cow, the state of health of the cow immediately antecedent to her calving must (Dr. Klein insists) be unfailingly held in view. This particular animal was, just at the time of her calving, the subject of some ailment or other of her own, independent of any disease produced in her by inoculation; and one evidence of this ailment

was a loss of hair. At first, indeed, this was regarded as a chronic complaint that would not affect the lessons of the experiment; but it presently became manifest to Dr. Klein that this particular cow, affording him affirmative results when her discharges were inoculated into dogs and pigs, might possibly, for all he could affirm to the contrary, have been suffering under some complaint having analogy with scarlatina, though productive of only trifling constitutional effect upon the cow and not interfering with her processes of parturition and milk-formation.]

Inoculation experiments with mixture of lochial discharge and milk of the cow.

In the meantime, on 26th February, Dr. Klein took lochial discharge from this cow and added it to the milk of the animal; and on 28th February he took more lochial discharge and added it to the sample of milk already polluted on the 26th. With this mixture on 28th February he inoculated (in amount one to two divisions of a Pravaz syringe) the subcutaneous tissue of the inguinal regions of—

(1.) Two dogs, *a.* and *b.*

(2.) Two pigs, *a.* and *b.*

And with a few drops only of the mixture—

(3.) Four guinea-pigs.

The temperature of all these animals was taken before experiment, and subsequent to experiment was taken twice daily during several weeks.

As regards the dogs: results were as follows:—In both there was after 24 hours (on 1st March) painful swelling and stiffness of the leg on the sides operated upon, with rise of temperature one degree centigrade.

Experiments on dogs.

(Dog *a.*)—After 48 hours (2nd March) had at the seat of inoculation a large ulcer with reddened and swollen margin, and exuding a discoloured ichor; while the neighbourhood of the ulcer looked erysipelatous. The animal was dull and fed badly. After 96 hours (4th March) this dog's wounds was granulating and healing.

Dog (*b.*) After 48 hours (2nd March) had a swelling the size of a pigeon's egg in the inguinal region, but its temperature was normal and it fed well. After 96 hours (4th March) this dog had distinct swelling and redness of the mucous membrane of the throat, with muco-purulent matter on the tonsil. The temperature was normal.

Experiments on pigs.

As regards the two pigs: After 48 hours (2nd March) both had much inflammation and œdématous swelling at the seat of inoculation. Temperature normal; fed well.

Pig (*a.*) after 3rd March, coughed; on 18th March it was still very poor and dull. Temperature had risen one degree centigrade.

Pig (*b.*) coughed on March 18. Temperature same as pig (*a.*)

Experiments on guinea-pigs.

As regards the four guinea-pigs: After 48 hours (2nd March) there was much swelling at the seat of inoculation, but temperature was normal, and the animals were lively. Subsequently the inguinal swellings increased and became abscesses full of cheesy pus.

Transmission of the induced Disease in the Dog to other Dogs.

Further inoculation experiments in second generation of infective material.

On the 3rd March Dr. Klein took by capillary glass tube fluid from the inguinal swelling of dog (*b.*) (the dog that had on 4th March affection of the throat). This fluid was red and contained numbers of red blood corpuscles and pus corpuscles, and as well what appeared to be micrococci. With one or two drops of the fluid Dr. Klein inoculated freshly-made incisions in the inguinal regions of two other dogs (*c.*) and (*d.*).

On dogs.

Dog (*c.*) On the 8th day (10th March) after inoculation there was distinct rise of temperature, amounting by next day to two degrees

centigrade; and the throat had become much inflamed. By the 12th day (14th March) the temperature of this dog had again become normal, but its throat remained much inflamed. The animal, however, fed well. On the 13th day (15th March) this dog had two epileptic fits, and it died two days later. *Post-mortem appearances: Lungs*, consolidations in both, especially in the right; *Spleen*, a bulla full of black blood on outer surface; *Liver and kidneys*, congested; *Intestines*, a quantity of matter like old (? altered) blood at pyloric end of stomach, in duodenum and in rectum.

Dog (*d*.) On 17th day (19th March) its temperature had risen half a degree centigrade. On 18th day (20th March) its temperature had risen another half degree, and its throat was discovered to be much inflamed, and there was muco-purulent discharge from the left tonsil.

No. 10.

On an Extensive Outbreak of Enteric Fever at Bangor and its Neighbourhood; by Dr. F. W. Barry.

* * * * *

Bangor is a well-known cathedral town and small port situated at the entrance of a valley which opens upon the Menai Straits. It consists of a crooked High Street more than a mile in length, which runs along the eastern side of a small stream called the Adda River. Between this street and river there is, commencing from the shore first, an irregular block called Hirael, containing, in numerous streets and cross streets, many of the oldest houses in the town. A few hundred yards from this we come upon the main part of the town, or Bangor proper, which extends on both sides of the High Street, but principally towards the river. This may be said to continue as far as the railway station, after which Bangor West End begins. Still further to the south-west is Glanadda, a suburb of the town situated in the Rural Sanitary District. On the opposite side of the valley to Bangor proper, and extending to the summit of the hill, is the new and well-built suburb of Upper Bangor. On the promontory opposite Hirael is another detached portion of the town, called Garth. A few houses called Port Penrhyn are situated to the east of Hirael, and are in the Rural Sanitary District. To the south-east of Port Penrhyn, and at a distance from it of two miles, lies the small village of Llandegai in the valley of the Ogwen. This is in the Bangor Rural Sanitary District. About four miles beyond this is Bethesda, a Local Board District, having a population of nearly 7,000. The population of the Bangor Urban Sanitary District was, in 1881, 8,240.

* * * * *

Water Supply.—The water for domestic purposes is obtained from the Afon Gaseg at a point below its junction with the Afon Llaver. It passes by means of a 9-inch pipe into a filter bed (which consists of about 10 inches of sand and 4 of gravel), and thence into a small reservoir. From this the water is conveyed by a 9-inch main through Bethesda and along the road through Llandegai as far as the main entrance to Penrhyn Castle, where it divides into two 7-inch pipes, one of which carries the supply to Penrhyn Castle, Hirael, High Street, Garth, West End, and Glanadda, the residue going into the Nant reservoir. The other pipe after supplying Port Penrhyn discharges into Twr Gwyn reservoir, which in its turn supplies Upper Bangor. In the course of the main from its source to Penrhyn Castle gate, branches are given off at various points to supply houses at Bethesda and Llandegai and certain detached farm houses on the road side. The supply is constant, and as the upper reservoir is about 500 feet above the town, at high pressure. Cisterns are not in use except for supplying water-closets. In Llandegai and in the poorer parts of Bangor the supply is obtained from stand pipes. At certain irregular intervals the 9 and 7-inch mains are flushed from the reservoirs at Bethesda into the River Cegin, at a point about 500 yards above the Penrhyn Arms Hotel on the Llandegai road, by opening sluice valves on the two 7-inch mains.

Upon an examination of the ground in the neighbourhood of the intake above Bethesda, a number of sources of pollution were found; as, for example, at a point about 200 yards above the intake, where the drainage from a privy and two or three pigsties runs into the stream, as does also that of about six or seven houses at Gwernydd. A little farther up the stream the drainage from a cow-house also finds its way in. At a distance of some 350 yards from the intake a small rapid

stream discharges the drainage of two houses called Llwynrhandir. Several other houses are situated higher up the stream and no doubt drain into it. The reservoirs of Twr Gwyn and Nant have been recently cleansed and whitewashed. They are both uncovered, and that at Nant is from its position very liable to pollution by means of decaying leaves, branches of trees, &c.

In Bangor and Glanadda 1,828 houses are supplied from the Bangor waterworks; in Bethesda, 141; in Llandegai, 31; and 24 detached houses between the two last-named villages also obtain their supply from the same source. In Bangor proper about 10 houses are supplied from other sources, in Bethesda 1,300, in Llandegai, 8, and in Caellwyngrydd 350, besides 32 detached farm-houses between Bethesda and Bangor.

Sewerage and Drainage.—The town of Bangor is drained throughout by means of pipe sewers. The main sewer follows pretty closely the course of the Adda from Glanadda to the outfall, which is at a point a very little below high-water mark to the eastward of Garth. As the tide recedes for a considerable distance there is, in consequence of the situation of the outfall, a large expanse of most offensive matter exposed every low tide all along the shore between Garth and Hirael. Numerous branches are given off from this sewer to Hirael, Bangor proper, Garth, Upper Bangor, and very recently Glanadda has been to a certain extent included within the system. Flushing points exist at the terminal ends of several of the sewers, and I was informed that flushing is carried out in ordinary times at fortnightly intervals. The ventilation of the sewers is extremely defective, the only attempt which has been made to effect this being the construction of some thirty shafts, at the highest points of the sewers, which act to a certain extent as safety valves, and out of which sewer air is given off in a highly concentrated state. Surface ventilation practically does not exist except at the recent extension at Glanadda, where open grids have been provided at the manholes. Here, however, the openings were found, with one exception, to be choked with dirt, which had been in some cases probably dropped by accident from cart-wheels, &c., and in others had been placed there purposely, "to keep in the smell." From the only grid which I found open at the time of inspection the sewer air was emerging in a highly concentrated state, and was undoubtedly a source of great nuisance to the neighbouring houses. The means for inspecting the sewers in the older parts of the town are very defective, neither lamp holes or manholes being placed at the points of change of direction in the sewers. Nearly the whole of the houses in Hirael, Bangor proper, Garth, and Upper Bangor are connected with the sewers, and at Glanadda a certain number have also been connected, but the bulk of the Glanadda houses drain into the Adda. This, which prior to its entering the village is a clean stream, rapidly becomes very foul, as, in addition to sewage, it acts as a receptacle for all kinds of solid filth wherever houses abut upon it, notably in the neighbourhood of Kyffin Square and Glanrafon. At the latter place a slaughter-house is said to drain into it. The Adda eventually discharges into the main sewer at a short distance from the outlet. This so-called river is unquestionably a source of great nuisance to all the houses in its immediate neighbourhood.

The house drainage is very defective. With the exception of one or two houses that have been erected within the last few months, the house drains are connected directly with the sewers, a trap between the two being regarded as an useless superfluity. In a few instances the slop-stone pipes have been cut off outside the houses and made to discharge over trapped gullies, but in the great bulk of the houses the slopstone

pipes communicate directly with the house drains and are furnished only with either the S or a common bell trap, these again being frequently out of order. In some houses which I inspected in the course of this inquiry I found a strong current of sewer air passing directly through the slopstone pipe into the kitchen and living rooms. In no case did I meet with any efficient ventilation of the soil pipes; in a few instances a 2-inch pipe was continued to the roof as a kind of safety valve, but ventilation by means of two openings in the course of the house drain is unknown in Bangor. Bath waste pipes and overflows were also found, as a rule, to discharge into the soil pipes.

The rain-water fall pipes, as a rule, discharge directly into the drains, and probably, in fair weather at least, some act to a slight extent as ventilators. In many cases the water-closet is situated in the centre of the house, without any windows or means of ventilation except into the adjoining bed and living rooms. One or two of the houses inspected I found to be furnished with one closet in the centre of the house and another outside. The inmates stated that they rarely used the one inside on account of the smell, thus increasing the likelihood of admitting sewer air by the want of water in the traps. The cottages and small houses are far less liable to danger from sewer gas than those of greater pretensions, as in the former the slop sink is almost invariably situated outside and the water-closet detached from the house. In several instances the house drains were found to be choked with sewage.

* * * * * * *

Epidemic of Enteric Fever.—The earliest cases of enteric fever of which I could obtain any particulars as having occurred in Bangor or the neighbourhood since the commencement of the present year (1882), were the following:—On the 4th of March a man died of enteric fever in the infirmary four days after the admission from Penmaenmawr. On the 8th of March a case is reported to have occurred at Caelleppa. On the 27th of March a death was registered from enteric fever at Llandegai in the Bangor Rural Sanitary District. On the 18th of April a death which occurred in the High Street was registered as from "simple continued fever," and from the history of this case I should regard it as doubtful whether it can be included in the category of specific fever. On the 19th of April a case was reported to have occurred on board the training ship "Clio," which was anchored in the Menai Straits. Mr. Rees, the Medical Officer of Health, also informed me that isolated cases of enteric fever had occurred from time to time for some years past in the Bethesda district. The cases noted above show that enteric fever had existed in a sporadic form in Bangor and the neighbourhood for some time previous to the general outbreak. I was, however, unable to trace any connexion between them and the epidemic which has now to be described.

In the subjoined table will be found a complete list of cases, with their localities and the dates of attack, so far as could be ascertained. On examining this it will be found that the outbreak can be roughly divided into three periods; the first from the last week in May to the end of the first week in July. This was characterised by a continued series of dropping cases which during the latter part of the period occurred daily in various parts of the town and district simultaneously. The second period extended throughout the second and third weeks of July, and was characterised by the occurrence of a sudden outbreak which affected the town and neighbouring villages at one and the same time. This was succeeded by a third period, which, like the first, has been characterised by the occurrence of dropping cases from day to day, and which has lasted up to the time of the present inquiry.

Table of Cases.

126 Households invaded. Total cases, 141.

Week ending.	Locality.	Date of Attack.	Cases in houses not previously affected.	Cases in houses previously affected.
May 23 (2 cases)	Brick Street	May 17	1	—
	Llwynrhandir*	„ 22	1	—
May 30	Nil.			
June 6 (3 cases)	Glendwr Terrace, Garth	June 2	1	—
	Garth Road	„ 2	1	—
	Garth Road	„ 3	1	—
June 13	Nil.			
June 20 (9 cases)	Caelleppa	June 15	1	—
	High Street	„ 15	1	—
	„ „	„ 16	1	—
	Garth*	„ 16	1	—
	Port Penrhyn*	„ 16	1	—
	High Street	„ 18	1	—
	Fron Square, Upper Bangor	„ 20	1	—
	Hirael	„ 20	1	—
	Mount Street	„ 20	1	—
June 27 (25cases)	High Street	„ 21	1	—
	Upper Bangor	„ 23	1	—
	„ „	„ „	1	—
	High Street	„ „	1	—
	„ „	„ „	1	—
	James Street	„ „	1	—
	„ „	„ „	1	—
	Pendre	„ „	1	—
	Fountain Street, Hirael	„ „	1	—
	Hirael	„ „	1	—
	Drum Street	„ „	1	—
	Glanadda*	„ „	1	—
	High Street	„ „	1	—
	Tanyralt	„ 24	1	—
	Pendre	„ „	1	—
	Upper Bangor	„ 26	1	—
	„ „	„ „	1	—
	Friars School	„ „	1	—
	High Street	„ „	2	—
	„ „	„ „	1	—
	„ „	„ „	1	—
	Rathbone Street	„ „	1	—
	Llwynrhandir*	„ 26 ?	2	—
July 4 (25cases)	Glanrafon	„ 28	1	—
	Water Street, Hirael	„ 29	1	—
	Rathbone Street	„ 29	1	—
	Caelleppa	„ 30	1	—
	High Street	„ „	1	—
	Upper Bangor	„ „	1	—
	Friars School	„ „	—	2
	Plas Llywd Street	July 1	1	—
	Glendwr Terrace, Garth	„ „	1	—
	Penralt	„ „	1	—
	Brick Street	„ „	1	—
	Drum Street	„ „	1	—
	Tabernacle Street	„ „	1	—
	„ „	„ „	1	—
	Caelleppa	„ „	1	—
	„	„ „	1	—

* The houses in which these cases occurred were unconnected with the Bangor sewerage system.

App. A. No. 10.

On Enteric Fever at Bangor, &c.; by Dr. Barry.

Week ending.	Locality.	Date of Attack.	Cases in houses not previously affected.	Cases in houses previously affected.
July 11 (19cases)	Strand Street, Hirael	July 1	1	—
	Upper Bangor	" "	1	—
	" "	" "	1	—
	Fron Square, Upper Bangor	" 2	—	1
	Ambrose Street, Hirael	" "	1	—
	Well Street	" "	1	—
	Llandegai*	" 3	1	—
	Plas Llywd Street	" 4	1	—
	Lime Grove Lodge	" 5	2	—
	Mount Street	" "	1	—
	Hirael	" "	1	—
	Llandegai*	" "	1	—
	Garth Road	" 6	1	—
	" "	" "	1	—
	Caelleppa	" "	1	—
	"	" "	1	—
	Llandegai*	" "	1	—
	Garden Square	" 7	1	—
	Bethesda*	" "	1	—
	Upper Bangor	" 10	—	1
	Port Penrhyn*	" "	1	—
	Welfield House	" "	1	—
	High Street	" "	1	—
	" "	" "	—	3
	Ciltwllan*	" 12	—	1
July 18 (40cases)	Ambrose Street, Hirael	" "	—	1
	Pendre	" "	1	—
	Llandegai*	" "	1	—
	Penlan*	" "	1	—
	Llandegai*	" 13	1	—
	" *	" "	1	—
	Bethesda*	" 14	1	—
	" *	" "	1	—
	Rathbone Street	" 15	—	1
	High Street	" "	1	—
	" "	" "	1	—
	" "	" "	1	—
	West End	" "	1	—
	Mount View, Garth	" "	1	—
	Plas Llywd Terrace	" "	1	—
	Tabernacle Street	" "	1	—
	Upper Bangor	" "	1	—
	" "	" "	1	—
	Wells Street	" "	1	—
	James Street	" "	—	1
	Summer Hill Terrace	" "	1	—
	High Street	" "	1	—
	Llandegai*	" "	1	—
	Bethesda*	" "	1	—
	" *	" "	1	—
	" *	" "	1	—
	" *	" "	1	—
	Llwynrhandir*	" "	1	—
	" *	" "	1	—

* The houses in which these cases occurred were unconnected with the Bangor sewerage system.

Week ending.	Locality.	Date of Attack.	Cases in houses not previously affected.	Cases in houses previously affected.
	Friars Road	July 16	1	—
	" "	" "	1	—
	Dean Court	" "	1	—
	" Street	" "	1	—
	Garth	" "	1	—
	High Street	" 17	1	—
	Bethesda*	" "	1	—
	Fountain Street, Hirael	" "	1	—
	Bethel Street	" "	1	—
	Penrhyn Castle*	" "	1	—
	Bethesda*	" 19	1	—
	James Street	" 20	1	—
	Union Street	" "	1	—
	Upper Bangor	" "	1	—
	Glanadda*	" "	1	—
	Pendre	" "	1	—
	High Street	" "	1	—
	Bethesda*	" "	1	—
July 25 (18cases)	James Street	" 21	—	1
	Garth Hill	" 22	1	—
	High Street	" "	1	—
	Mountain Square	" 23	1	—
	Tyddyn Jolyn*	" "	1	—
	Lime Grove*	" 24	1	—
	Hirael	" "	1	—
	Penybrotch	" "	1	—
	Upper Bangor	" "	1	—
	Caelleppa	" 25	1	—

* The houses in which these cases occurred were unconnected with the Bangor sewerage system.

The first cases which appear to have a direct connexion with the outbreak, in regard to which this inquiry was instituted, occurred in the week ending May 23rd, one in Brick Street, Bangor, on May 17th, and one on May 22nd in Llwynrhandir, a house situated near the River Gaseg, above the intake of the Bangor Waterworks. In the week ending May 30th no fresh cases occurred, but in the first week in June three persons were attacked in Garth. In the next week there were again no cases, but from the 15th June to the 7th July fresh cases were reported almost daily, until by that date no less than 76 cases had occurred in 70 households.

From examination of the list of cases in detail it will be seen that on several occasions there was a simultaneous appearance of the disease in various districts and streets. This at once suggested some common medium of infection, and a careful examination was first made of all the sources of milk supply, with, however, negative results, as in addition to the fact that patients were found amongst the customers of almost every milk dealer in the town, many of them kept their own cows, and obtained their milk from no other source.

The evidence with regard to infection by means of sewer air was also negative, at any rate in the earlier cases. Let us take for instance those which occurred during the week ending June 20th. Here we find one case in Caelleppa, three in different parts of the High Street, one in

Mount Street, one in Upper Bangor, one in Hirael, one in Port Penrhyn, and one in Garth. The houses in which the two last occurred were not connected in any way with the sewerage system. Curiously enough also each of the other cases was on a different branch sewer from all the rest, and none had any connexion (except through the main sewer) with the branches which may be assumed to have been infected by the case in Brick Street which commenced on the 17th May, and the three cases in Garth, which occurred during the first week in June. In the succeeding week ending June 27th, a still wider extension took place, including many parts not previously affected, the disease appearing in all parts of Upper Bangor, Hirael, and Bangor proper. In addition to these there was a case at Glanadda in a house which had no connexion with the Bangor sewerage system. Two additional cases also appeared at Llwynrhandir, brought on no doubt by direct infection from the case which began here on May 22nd. These cases were of an extremely mild type, and the exact date of their commencement is very doubtful. From the 27th June to the 7th July there was daily a steady increase in the number of cases occurring within the area of the water service. There were two cases at Lime Grove on the 5th, two in the village of Llandegai, two miles from Bangor, on the 3rd and 6th respectively, and one at Bethesda, some six miles off, on the 7th. None of these last cases were in houses connected with the Bangor sewer system, or had any common source of milk supply, but all the cases with the exception of those at Llwynrhandir which had occurred up to this date had had one and the same source of water supply, viz., that from the Bangor Waterworks.

Thus, up to July 7th, the disease had appeared in all parts of Bangor, and in the three villages of Bethesda, Llandegai, and Port Penrhyn, which were totally unconnected with the Bangor drainage system, or with one another, and in Glanadda, which was only connected in a minor degree. The question now comes to be considered whether any source of specific pollution to the general water supply was in existence prior to the general outbreak in June and July. I have already directed attention to the case of enteric fever which occurred towards the end of May at Llwynrhandir, and shall now proceed to consider the circumstances in detail. On the 13th June Mr. Rees, the Medical Officer of Health, having been informed that a suspicious case had occurred in this house, visited it; the inmates, however, denied that there was any fever there at all, and stated that the patient was suffering from bronchitis. Mr. Rees was satisfied that his suspicions were correct, and in this opinion he has been fully justified by the medical gentleman who attended the case, who informed me that it was an extremely well marked case of enteric fever of a severe type. Mr. Rees directed the inmates to bury all excreta, &c., and this they at the time promised to do. From information, however, obtained from credible witnesses, I am convinced that nothing of the kind was done until a considerably later period, when no doubt the discharges from this particular patient were buried in the garden. The slops and washing water from this house are thrown into a sink at the back and pass by means of a covered rubble drain along the back of it and the house adjoining, where it discharges into a small rapid stream, which in its turn is conveyed as far as the boundary wall of the garden in a similar covered drain, and is thence conducted by means of an open ditch direct to the River Gaseg, into which it discharges at a point about 350 yards above the intake of the Bangor water supply, the whole distance from the house to the intake being about 700 yards. Upon removing some of the stone covers from a portion of the stream near the house a most offensive smell was perceived. The stream has an exceedingly rapid flow, so much so indeed that some whitewash which I poured into the sink behind the infected house could

be traced for a considerable distance towards the Gaseg. It will thus be seen that there is a direct communication between the infected drain at Llwynrhandir and the small stream from which the Bangor water supply is drawn, and in this manner no doubt infected matter found its way into the filtering reservoir. The privy at Llwynrhandir is of the ordinary cesspit type; the pit is, however, below the level of the drain already referred to.

As to the capability of the filtering material in the filtering beds at the waterworks for destroying or preventing the passage of infective matter we know little, and here the question need not be considered, because I found that from the presence of old defective plugs in the filters themselves, fully a third of the water was passing direct into the watermain without any filtration whatever. The filtering sand has not been renewed for a great number of years, although I understand that it undergoes a certain amount of cleansing from time to time. I was further informed by the clerk to the Urban Sanitary Authority, who is also the waterworks manager, that from the peaty character of the water, the filters frequently become clogged, and at such time the water cannot be filtered rapidly enough to meet the demand, hence the water is passed into the mains without any attempt whatever at filtration.

Here, then, we have established a direct means of communication between the consumers of water and the specifically poisoned contents of a drain at Llwynrhandir; further, we have cases occurring simultaneously miles apart from one another, which, with the exception of the water supply, had no circumstances in common, there being also an entire absence of cases in houses not so supplied. I have therefore now no hesitation in attributing the primary spread of the disease to the water supply.

Before leaving the subject of this primary outbreak it will be noticed, on an examination of the table, that a sudden increase in the number of families invaded occurred on the 23rd June and 1st July, and it is interesting to observe from the rainfall register herewith appended that about ten days or a fortnight prior to each of these occasions there had been a considerable fall of rain (which was probably much heavier at Bethesda, from its superior elevation, than at the station), thus affording increased facilities for the washing out of the infected drain, and for the conveyance of specific matter to the water supply.

Register of Rainfall taken at Bryn-y-Menai, Bangor, during May, June, and July 1882. *Inches.*

Day of Month.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
May	·42	·06	—	—	—	—	—	—	—	—	—	—	—	—	—	—
June	—	—	·11	·05	—	—	—	·56		·10	·03	·09	1·00		—	—
July	—	—	—	·20	·06	·03	·56	—	·03	—	·03	·09	·12	—	·56	—

Day of Month.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
May	—	—	—	—	—	·41		·85	—	·09	·11	·12	—	—	—	2·06
June	·75			—	·53	·25	—	·23	—	·05	—	—	—	—	—	4·15
July	·08	·21	·02	—	·30	·16	·45	·06	—	—	·16	·01	36	—	·07	5·36

We have now to consider the second period of the epidemic. From the 10th to 17th July, inclusive, a remarkable extension of the disease occurred, during which no less than 39 new households were affected (20 of them, it is said, in one day, July 15th) in widely different localities.

Two cases occurred in Llwynrhandir and its neighbourhood, 7 in Bethesda, 1 at Penlan (a detached farmhouse on the road between Bethesda and Bangor), 4 in Llandegai, 1 at Penrhyn Castle, 1 in Port Penrhyn, 2 in Hirael, 15 in Bangor proper, 1 in Bangor (west end), 3 in Upper Bangor, and 2 in Garth. Besides these, 8 new cases occurred in houses previously affected. The two at Llwynrhandir probably contracted the disease by direct infection from the original cases, one of them having been exposed to it by acting as nurse, and the other living in the next house. Of the seven reported from Bethesda, two were imported from Bangor, and three others were supplied with water from the Bangor main. The remaining two were stated to receive a separate supply from a spring near their houses, but upon further inquiry I ascertained that about the end of June and beginning of July this source had failed, and they obtained water for drinking purposes from friends who took the Bangor supply.

At Penlan the water was also received from the Bangor main, and the four additional cases from Llandegai had it from the same source. One of these cases was that of a young man who is engaged at work at a distance from the district during the week, only returning to Llandegai on Saturdays and Sundays. He was first affected on July 13th, and had been at home on the evening of the 1st and all day on the 2nd, when he was known to have drunk plentifully of the Bangor water. On the 17th a case occurred at Penrhyn Castle, which possesses a separate supply pipe from the mains, as already stated, and which has no other circumstances than its water supply in common with the previously infected districts. Of the numerous other cases which occurred in all parts of Bangor at the same time, some, undoubtedly, received the infection from previous cases there by means of the sewers, still many of these could not be thus accounted for, and the occurrence of such a number of cases simultaneously over such a wide-spread area pointed to some further cause than that already referred to with regard to the first outbreak.

I now proceed to point to what I consider as the solution of the matter.

On the evening of June 29th the mains between Bethesda and the River Cegin were flushed in the manner already described (*see* page 72). The sluice valves were closed at about 1 o'clock on the morning of the 30th. This was done suddenly, and in consequence the 9-inch main burst at a point between Penlan and the main entrance of Penrhyn Castle, about 240 yards from the former and 590 from the latter. The water ran to waste at this point until 2 p.m. on the 30th, when the valve at Bethesda was closed and the pipe repaired. In the evening the water was again turned on, the town, with the exception of Upper Bangor, having in the meantime been without water, or with a very short supply, for nearly 24 hours.

Now we already know that under certain conditions no attempt whatever is made at filtration of the water, and in consequence of the great waste, owing to the burst on June 30th, it may be safely assumed that on July 1st the plugs were withdrawn and the water passed directly into the mains from over the filter beds. In this case, as the orifice of exit is only 3 inches above the surface of the filtering material, there can be no doubt that any dirt which had accumulated on the top of the filter

would be carried into the reservoir and thence into the mains. But even assuming that the plugs were not removed there can be no question that a great disturbance did take place in the reservoir and filter beds on July 1st and 2nd, as from all sides I received information that on those days the water was much discoloured, and even in some cases it was stated to have smelt offensively.

The facts, then, are these:

(*a.*) That the original case at Llwynrhandir, which began on the 22nd May, had probably been passing infected matter into the River Gaseg to a greater or less extent from that date until June 30th.

(*b.*) That, prior to June 26th, two further cases had occurred in the same house, and that in these, owing to the mildness of the disease, no precautions had been taken, and the danger of the infected matter passing into the stream had been thereby much increased.

(*c.*) That owing to the flushing and consequent bursting in the water main, considerable disturbance occurred in the water supply on June 30th and July 1st.

(*d.*) Finally, that a simultaneous outbreak in various new localities occurred from ten days to a fortnight after this took place.

From the 17th July to the 25th 18 new cases have been reported, occurring in 17 new households. The greater number of these houses are on the line of previously infected sewers. In several which I personally examined, in which servants were the sufferers, I found that sewer air was laid directly on to the slopstone at which they worked.

From the commencement of the epidemic to the end of July the total number of cases reported to have occurred was 141, 83 males and 58 females. Nine were persons under 10 years of age, 87 between 10 and 25, 36 between 25 and 50, and 9 over 50. Of the total cases, 8 had up to July 31st proved fatal. I had an opportunity of examining several of the patients, and found that they presented typical symptoms of enteric fever, the rash, temperature, and diarrhœa being in most cases well marked. In several instances hæmorrhage from the bowels had occurred.

Taking all the facts of the case into consideration, it is my opinion that the water supply became specifically infected to a slight degree on or about May 22nd, and that this pollution continued until the end of June. That this continuous slight pollution accounts for the dropping nature of the cases up to July 7th. That the special outbreak in the second and third weeks of that month was due to the communication of infected matter in a concentrated form owing to the disturbance in the reservoir and filter beds, resulting from the accident to the main on June 30th. Finally, that a certain number of the cases which have occurred from the end of the first period to the present time are due to the direct introduction of infected air from the sewers into which the discharges from cases of enteric fever had been received.

* * * * * * * *

The history of this inquiry shows that the spread of fever in Bangor was almost if not entirely owing to causes directly under the control of the Sanitary Authority, viz., the liability of the water supply to contamination, the defective ventilation of the sewers and house drains, and the foul accumulations of excrement and refuse in the town. These latter, even where not actually the initial cause of the disease, undoubtedly favoured its spread.

12th August 1882.

App. A. No. 10.

On Enteric Fever at Bangor, &c.; by Dr. Barry.

Postscript (Sept. 20, 1882).

In consequence of the continued prevalence of enteric fever in Bangor, I paid a second visit to the city and neighbourhood on the 12th September to ascertain the extent of the epidemic and the measures taken by the Sanitary Authorities concerned to check the spread of the disease.

The total number of cases reported to the Authorities from the 1st August to the 12th September will be found in the annexed table. This only represents approximately the number of cases, as some of the medical practitioners in the district have not furnished complete lists of their patients to the Sanitary Authorities.

Bangor Urban Sanitary District		306
Bangor Rural Sanitary District.	Glanadda	7
	Llandegai and neighbourhood	17
	Other parts of R.S.D.	6
Bethesda Urban Sanitary District		46
Cases which received infection in Bangor, but removed to other districts		20
Training ship "Clio"		2
Cases on board other ships in harbour		3
Total number of cases reported between 1st August and 12th September		407
Cases reported prior to 1st August		141
Total number of cases of Enteric Fever from commencement of epidemic to the 12th September		548

Of these 548 cases, 29 in the Bangor Urban, 3 in the Bangor Rural, and 10 in the Bethesda Urban Sanitary Districts respectively, had proved fatal up to the 12th September.

At the time of my visit the Bangor Urban Sanitary Authority appeared to be acting most energetically in the directions indicated by me on my interview with the Authority on the 3rd August.

All sources of pollution to the water supply on the East bank of the River Gaseg had been cut off by means of an intercepting trench which discharges below the intake.

The old filtering material had been removed and the water was being sent through the mains unfiltered.

A house-to-house inspection of the city was in progress in order that defects in the drainage and water supply, &c., might be at once remedied.

Up to the time of my visit, 49 houses had been thoroughly disconnected from the sewers, 12 cesspit privies abolished, and between 70 and 80 nuisances abated. The sewers were being flushed daily and periodically disinfected.

Ventilators were in progress of construction at intervals of about 100 yards in all the main sewers.

A house named Fairview had been taken and fitted up by the Sanitary Authority as a temporary hospital; this secured the isolation of 24 patients. Tent hospitals giving accommodation to 20 patients had also been erected, and in addition to these temporary hospitals, 11 patients were accommodated in the Infirmary, and 7 in the infectious ward at the Union Workhouse.

It is, however, much to be regretted that considerable delay took place in the carrying out of some of the more important of the above

measures, *e.g.*, the removal of the old filtering material was not ordered by the Sanitary Authority until August 17th, and the work was not executed until the 5th of September. The provision of efficient ventilation for the main sewers, to the necessity for which I had drawn particular attention on the 3rd August, was only ordered by the Sanitary Authority to be done to a limited extent on the 31st August, and not fully until the 7th September, the work being in progress at the time of my second visit.

The Bethesda Urban Sanitary Authority, who labour under the disadvantage of not having any system of drainage in their district (the construction of a complete system of drainage is in progress), were found to be acting most energetically in the removal of nuisances, and the disinfection of all refuse matter and drains in the neighbourhood of infected houses. This Authority had further fitted up a large school-room as temporary hospital for the accommodation of about 30 patients.

Note by the Medical Officer.—After the above date, and (it would seem) as the result of the energetic action of the Urban Sanitary Authority, the epidemic of enteric fever at Bangor very rapidly declined.

G. B.

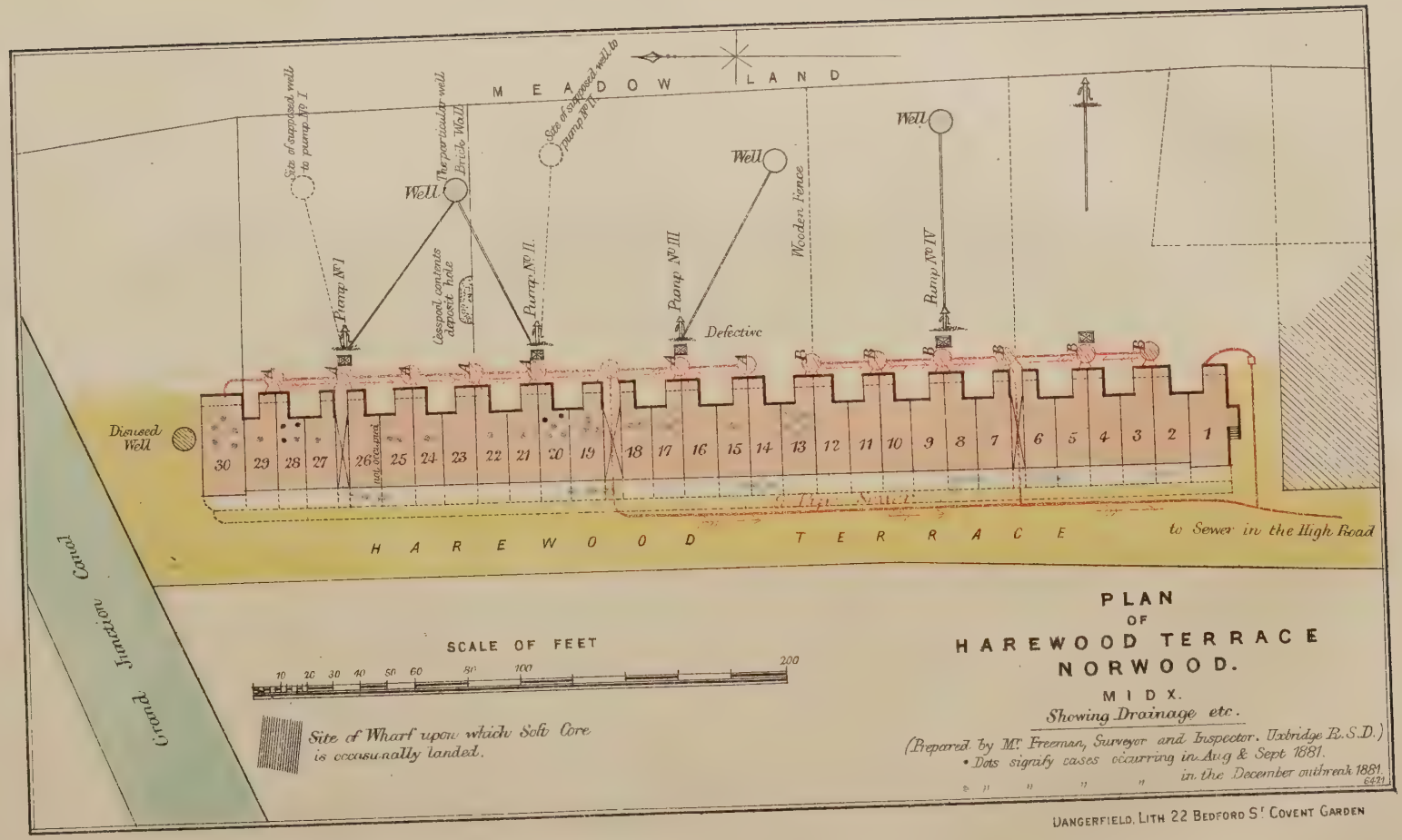
App. A. No. 11.

On Enteric Fever at Norwood, Uxbridge; by Mr. Power.

No. 11.

On a Localised Outbreak of Enteric Fever at Norwood, in the Uxbridge Rural Sanitary District; by Mr. W. H. Power.

The outbreak of enteric fever with which this report deals occurred in December 1881, at Harewood Terrace. This terrace, which comprises 30 artizan dwellings, is situate near to Norwood village. It was built some 15 years ago along one side of a short private road giving access from the Norwood High Road to a wharf on the south bank of the Grand Junction Canal. The soil hereabouts is river gravel, or brick earth, and the surface all but level. The dip of the land is east and south in the direction of a stream traversing Osterley Park. *The houses of the terrace* are brick-built, of two storeys, with slated roofs. In general appearance and in the amount of accommodation they afford, these houses are in advance of dwellings commonly occupied by a similar class of persons in the district. Their inmates however are not always satisfied with them. Many pointed to a general wetness of the house walls, highly suggestive of omission by the builder of the necessary damp-course, while others complained of faults of construction, or of tendency to dilapidation. Each house comprises not less than four rooms of good size, lofty, well ventilated, and lighted back and front by ample sash windows. All the houses are provided with garden ground. This is at the rear of the terrace and is reached, as are the back offices of the houses, by three "underways." These pass beneath the dwellings, and allow the adjacent houses to have an additional bedroom. *The water supply* of the terrace is from half a dozen pumps situated in the back premises and drawing from wells sunk in the gardens 70–80 feet in the rear of the houses. The wells are only 8–10 ft. deep and are but dry steyned. No doubt they get their water from the superficial soil of the neighbourhood. *Excrement disposal* is by hopper-closets discharging to cesspools. Each house has its own closet entirely cut off from the dwelling by an intervening small back kitchen or wash-house, and is entered from the garden. The closets, whether or not fitted with pans, are without water supply, and depend therefore for their flushing on an occasional pail of water thrown into them by the tenant. Flushing in this fashion of closets gets encouragement from absence in the dwellings and wash-houses of any sinks, and by the circumstance that the closet is nearer the back door than the pump slopstone which is the alternative places for deposit of liquid refuse from the houses. *The cesspool system* adopted for the terrace is somewhat complex, though a glance at the plan attached to this report will make it easy of comprehension. The cesspools, 14 in number, are situated beneath a pathway at the back of the houses, within a few feet of the closets and 60 or more feet from any of the wells. They are linked together by 6-inch overflow pipes into two groups; and each group discharges separately, by 6-inch pipes through underways to a 9-inch pipe drain in the front street, which drain in turn goes to the brick sewer in the high road. The cesspools, 5 ft. deep and 4 ft. 9 in. in diameter, are constructed of brick in mortar; they are not, nor seemingly were they intended to be, impervious. Rarely do they require emptying, notwithstanding the abundance of closet flushings, slop water, and surface washings poured into them. They are altogether unventilated, as are the drains connecting them and the drains also which ultimately receive their combined overflows. *Trapping* of inlets to cesspools and to drains is universal. Even the


MEADOW LAND
Site of supposed well to pump No I
Well
The particular well
Brick Wall
Site of supposed well to pump No II
Well
Well
Wooden Fence
Pump No I
Cesspool contents deposit hole
Pump No II
Pump No III
Defective
Pump No IV
Disused Well
30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
Soil Pipe
HAREWOOD TERRACE
to Sewer in the High Road
Grand Junction Canal
SCALE OF FEET
10 20 30 40 50 60 80 100 200
Site of Wharf upon which Soil Core is occasionally landed.
PLAN
OF
HAREWOOD TERRACE
NORWOOD.
MIDX.
Showing Drainage etc.
(Prepared by Mr Freeman, Surveyor and Inspector. Uxbridge R.S.D.)
• Dots signify cases occurring in Aug & Sept 1881.
" " " " in the December outbreak 1881.
6421

DANGERFIELD, LITH 22 BEDFORD ST COVENT GARDEN

rain spouts at the front of the houses are trapped before entering the drain in the private road. Rain spouts at the back of the terrace are directed into water tubs or discharge over the surface. *Ashes and refuse* as well as cesspool contents (when cesspools are emptied) are utilized over or buried in the gardens.

The outbreak.—The outbreak of enteric fever in this terrace in December comprised some 30 cases in 14 houses. Until this occurrence there had not been for several years in Norwood any outbreak of like suddenness and magnitude, though the district may be regarded as seldom for any length of time altogether free from fever: only last autumn there occurred a small and circumscribed outbreak of this fever at Norwood Green, a quarter of a mile distant from Harewood Terrace, and about the same time a few cases occurred in this terrace also. Locally various notions were entertained as to the cause of the December outbreak, and special stress was laid on the fact that the landing at the wharf adjoining Harewood Terrace of "soft core" manure brought from London, had of late become an increasing frequent occurrence. Soft core consists, it would seem, of dustbin contents with garbage of various sorts, and unquestionably the effluvium of soft core is commonly very offensive and very nauseating. Deposit therefore of several barge loads of this stuff on the wharf referred to about the time of the occurrence of the outbreak sufficed to satisfy not a few persons that soft core must have caused the fever. The medical officer of health of the Uxbridge rural sanitary district, Mr. Roberts, showed however that whatever may be the ability of soft core to occasionally cause fever, it could hardly in the present instance be with justice accused of having done mischief, for at the time in question all the houses in Harewood Terrace had been exposed to, and most of their inhabitants had been annoyed by, soft core effluvium, whereas the fever cases had been strictly limited to the upper part of the terrace. He therefore was disposed to refer the fever to impurity of water supply, and to defects of drainage, circumstances that might have been peculiar to a part only of the terrace. At this stage I was instructed to confer with the medical officer of health on the subject of the outbreak; and I set to work with his and the inspector of nuisances (Mr. Freeman's) assistance to study exactly the circumstances of the terrace and its inhabitants, with a view of determining which of the above, or what other likely cause of enteric fever was chiefly responsible for the outbreak. For it was only by minute differentiation of the circumstances of the houses and persons attacked and those not attacked by the fever, that trustworthy indications as to the precise cause of the outbreak were to be hoped for. Investigation therefore was concerned with the smaller details of the special localisation of the fever already referred to; and at the same time it took into account the time-incidence of the disease on the part of the terrace invaded, the sources of various articles of food that might have conveyed infection to the persons attacked, the circumstances of the life of those persons and their house-mates, and certain physical conditions appertaining to their dwellings. In what follows, the reader will find convenience in consulting the accompanying plan.

1. *Localisation of the Fever.*—Detailed inquiry on this point showed that since August 1881, 12 occupied houses (Nos. 1 to 12, inclusive) in the lower part of the terrace had wholly escaped fever. In the same period and in the upper part of the terrace 15 families in 17 occupied houses (Nos. 13 to 30, inclusive) had been invaded. Among the 15 families there had been 35 cases, none of which (though several patients

relapsed or had severe bowel hæmorrhage) had so far proved fatal.* The incidence of the fever on the population of the terrace at several ages is given in the following table :—

Table I.

Lower part of Harewood Terrace, Houses numbered 1 to 12 inclusive.			Upper part of Harewood Terrace, Houses numbered 13 to 30 inclusive.			
Ages.	Number of Persons living.	Number of Persons attacked.	Ages.	Number of Persons living.	Number of Persons attacked.	*Attacked per Cent. of Total.*
0— 5 years -	8	—	0— 5 years -	20	5	*25·0*
5—15 „ -	15	—	5—15 „ -	29	20	*69·0*
15—25 „ -	5	—	15—25 „ -	10	2	*20·0*
25—40 „ -	7	—	25—40 „ -	27	7	*25·9*
40 + „ -	16	—	40 + „ -	11	1	*9·0*
All ages -	51	—	All ages -	97	35	*36·0*

This table is instructive in more than one way. It demonstrates very clearly the limitation that has been noted of the operation of the cause of the fever to a particular part of Harewood Terrace. Also it shows in the very intensity of the incidence of the disease thereon, and especially in the varying intensity of its incidence with reference to the age, and therefore the susceptibility, of the inhabitants, a cause of fever operating pretty uniformly on the population whatever their age within the above limits. And further, it suggests a fever-distributor of great potency such as has heretofore been recognized as operating through water or milk.

2. *Incidence of the Fever in Time.*—This is dealt with in Table II.

Table II.

Harewood Terrace, Upper Part. Nos. 13 to 30 inclusive.

Time of Attacks.	Number of cases occurring.	Houses having Cases in them.
1881.		
Month of August - -	2	No. 28.
„ September - -	2	Nos. 28 and 20.
Early October - - -	1	No. 20.
Week ending 3rd December -	—	—
„ 10th „ -	13	Nos. 24, 22, 19, 21, 18, 30, 27, 29, 25, 17, and 20.
„ 17th „ -	11	Nos. 28, 30, 25, 17, 13, 15 and 20.
„ 24th „ -	5	Nos. 19, 17 and 13.
Early January 1882 - -	1	No. 13.
Aug. 1881, to early Jan. 1882 -	35	14 houses.

* Between the date of the above investigation and mid April three additional cases of fever occurred in the terrace. Two were in a house previously invaded, and one in a house at the lower end of the terrace, none of the cases were fatal.

Two series of cases of fever in the terrace are here seen. A first series, consisting of some half-dozen cases occurring in two houses in August, September, and early October; and a second series, separated from the first by an interval of two months, constituting a sudden outburst of fever freshly and almost simultaneously invading 12 of the 17 households, and at the same time freshly attacking the two houses which had suffered in the autumn. It is this sudden outburst of enteric fever that requires explanation. Was this outburst independent of those earlier occurrences of fever about August and September, or was it, notwithstanding the two months interval between the two series, related in some way to those earlier cases? For answer to these questions it is necessary to pass on to the result of inquiry as to food and other personal conditions of the persons attacked in the outburst.

3. *Food Circumstances and other personal Circumstances of People attacked.*—In taking a census of the terrace for ends already evident, I made inquiry in each household as to the consumption of articles of food that might have conveyed infection, and as to the sources whence each had been derived. The food articles inquired about included meat, bread, and the like, besides milk. To the latter especial attention was given, for the reason that the suddenness and comprehensiveness of the fever incidence had been, as has been said, such as to suggest what has been termed a "milk outbreak." The result of this inquiry was altogether negative. The sources of supply of the above articles had, during the period in question, been very various, and it seemed highly improbable that infection could have been conveyed in food. For instance, households invaded had, inclusive of condensed milk, been getting milk from four separate sources, and this at the same time that other households in the lower half of the terrace, most of them also supplied from one or other of these four sources, had altogether escaped fever. Moreover, two of the invaded households had, for many weeks, been wholly without milk. Similarly, inquiry as to the habits and doings of individuals attacked tended to show that they had not contracted their illness away from home. The occupation of parents and the school attendance of children had been similar to, often identical with, that of inhabitants of the lower part of the terrace, who did not suffer at all in the outburst. Upon the whole, therefore, it became evident that the cause of the recent fever had not been suddenly or even recently transported to the terrace from elsewhere, and by a process of exclusion it began to appear that the cause of that outbreak was to be sought for in those earlier cases in the terrace which occurred about August and September. It became, in fact, apparent that infection-material from these earlier cases had been fostered within a limited area of the upper part of the terrace after a fashion that conserved it for a while and then permitted it to become suddenly operative within strictly defined limits in November and December. Thus regarded the first series of cases in August and September acquired considerable importance, and they had now to be considered along with certain physical circumstances by help of which they may have done mischief.

Precise knowledge of the cause of this first series of cases was not now to be had, nor is it essential for present purposes. This much may, however, be said. These cases, all but two of which were in children, occurred at a time when other fever cases existed a quarter of a mile off, at Norwood Green, and it is probable that some at least of them got their infection there. The Norwood Green fever was, the medical officer of health satisfied himself, due to specific pollution of the water of a particular well thereabouts, and I have been able to get evidence that

the two children, the first of the inhabitants of Harewood Terrace to suffer fever, had, after playing on Norwood Green, drank water from that well about two weeks before their attack. Probably other children of the terrace, inclusive of other sufferers and of a doubtful case of fever, did the like, and it is noteworthy that the only adults suffering among the first series were two mothers who were attacked after several weeks attendance on their children sick of fever. It appeared probable, therefore, that none of the cases of this first series were due to dissemination in the terrace of infection in quite the same way that produced the December outburst.

4. *Physical Circumstances that may have conduced to the Outbreak of December.*—In both instances of households suffering in August and September the sick persons were treated at home, and their bowel evacuations were got rid of down their respective closets, whence they passed to a series of cesspools. It became a question, therefore, how far the cesspool conditions of the houses might have conduced to the subsequent outbreak in December. They might have done this in one or other of two ways; by conservation in the cesspools of enteric fever material which, eventually becoming suspended in cesspool air, finally escaped with that air from the whole series of cesspools into or about the houses, or, by soakage of this enteric fever material from the leaky cesspools into the soil and thence into the wells hereabouts. As to the first of these suggestions, it may be said that the cesspool system of the terrace appears specially adapted for the process. The cesspools, linked together as they are by overflow pipes, are practically one cesspool. Habitually they are overfull, and their connecting pipes, therefore, provided for the ready transference from a higher to a lower cesspool of any semi-fluid matter that it may contain. And in that each series of cesspools is unventilated, the overflow pipes must act in one and another direction as air-communicators between the cesspools.

Given, therefore, the introduction to one cesspool of infective material that can become suspended in air, the whole series of connected cesspools incurs a liability to become infected after a fashion that might enable each cesspool of the series to give off, under pressure by flushing, specifically infected air in its neighbourhood. Referring again to the plan it will be seen that something of this sort may very well have occurred, after infection of the cesspool serving houses Nos. 28, 29, and 30, in the terrace, to the A series of cesspools, and it will be seen that the distribution of this A series of cesspools pretty closely coincides with the distribution of the fever. But there are difficulties in accepting this hypothesis of causation of the outburst. It affords no sufficient explanation of the two months interval between infection of the A series of cesspools and the occurrence of the outbreak, or of the suddenness of that outbreak when it did occur. Again cesspool air would not have been forced out into the houses. These are disconnected from the cesspools and the cesspools therefore could only have infected the air of outdoor closets and the atmosphere about the houses so as seemingly to involve risk to other persons besides the inmates of houses served by the A series of cesspools. Thus the strict limitation of the outbreak would remain insufficiently accounted for. Finally, reference to the plan will show that house No. 13 is served by the B and not by the A series of cesspools. Nevertheless, the inmates of this house suffered coincidently with inhabitants of the upper part of the terrace from the December outbreak, whereas their next door and other neighbours southwards, at Nos. 12, 11, 10, &c., separated from them by a garden fence only, had no illness. This circumstance goes

far to set aside a hypothesis of causation of the outbreak through cesspool air, and, as will presently be seen, it leads of necessity to consideration of sufficiency of the circumstances of water supply to account for the facts of the outbreak.

Very early in the investigation it was noted that the suddenness, the intensity, and the impartiality of the incidence of the outbreak best accorded with what is known of enteric fever epidemics caused by specifically infected water or milk. Milk causation of this outbreak had for good reason to be set aside, while as regards its possible causation by water there appeared at first sight a serious difficulty. The 14 houses invaded in the upper part of the terrace are provided with three pumps, each of which, it was affirmed, sucked from a separate well, and hence there appeared to be required for explanation of the outbreak by water causation sudden and simultaneous infectiveness of the water of three separate wells many yards distant one from each other and from the houses. This seemed a highly improbable occurrence, and thus some time was spent over the cesspool air hypothesis, until the great difficulties in explaining the attack of inmates of house No. 13 (which as has been seen is on a separate system of cesspools) furnished a clue of much value. It was found that pump No. III. which served houses Nos. 13, 14, 15, 16, 17, and 18, had at the date of the outbreak been for a long time out of order, and as a consequence the inmates of these houses had for many weeks before their illness sought water elsewhere. Naturally they resorted to the pump most accessible, which happened to be pump No. II.; for pumps No. IV. and No. I., which also they could have used, were, as will be noted from the plan, cut off from them, the one by a strong fence, the other by a brick wall. Thus it came to be seen that at the time of the outbreak all the houses invaded had been for many weeks getting their water supply from one or other of two instead of from three pumps as had been confidently stated. This reduction in the number of pumps, and therefore of wells, implicated did not however greatly help toward belief in water causation of the outbreak; for there seemed well-nigh as much difficulty in accepting sudden and simultaneous infection of two as of three wells. In this dilemma I sought to ascertain whether pump No. II. had not for some reason or other come into temporary and exceptional use shortly before the occurrence of the outbreak by the inmates of houses 23 to 30. But this suspicion had to be abandoned. Both pumps had been in good order throughout the period in question, and pump No. I., which is separated from pump No. II. by a brick wall, had been used and solely used by the inmates of houses 23 to 30; all of which houses had been invaded in the outbreak. Still I was unable to accept a hypothesis of sudden and simultaneous infection of two widely separate wells far distant from the houses and from the cesspools: rather I was disposed to regard the confident local assurance rsspecting pumps Nos. I. and II. sucking from separate and distinct wells as open to doubt; and thus it came about that I announced that for complete belief in water causation of the outbreak it was necessary that pumps Nos. I. and II. should suck from a single well. My surmise was quickly put to the proof by Mr. Freeman, the Inspector of Nuisances, with the result, a great surprise to certain inhabitants of the terrace, that the suction-pipes of Nos. I. and II. were found to lead to one and the same well.

Here, then, in infectiousness of a particular well water is explanation in some sort of the outbreak. It accounts for the limitation of the

outbreak to the particular part of the terrace comprising houses 13 to 30, as well as for the intensity of the fever incidence on these houses; while it is in accord with the indications of Table I., which pointed to a fever-distributor of heretofore proved impartiality and potency. But it does not explain all the facts. There remains to be accounted for the two months' interval between the August-September series of cases and the outbreak of December; and especially does the suddenness of the outbreak, when it did occur, require explanation.

At an early stage of suspicion as to water causation of the outbreak and upon assumption of conservation in the cesspools of enteric fever material derived from the first series of cases with subsequent soakage thence of this material through 60 or 70 feet of soil to two or more wells, the above facts did not appear easy of explanation. But no sooner was a particular well found to be alone in question than a clue appeared that had been wanting. For thus considered it was seen that suddenness of the outbreak almost necessarily implied sudden infectiveness of the particular well, such as might have resulted from fresh conditions newly brought to bear on it, and upon it alone; and search in this direction now revealed the following facts:—On 27th November 1881 cesspool cleansing was commenced in the terrace and was repeated on subsequent days up to early December. The cesspools dealt with were three of the A. series next in order to that which received bowel evacutaions of the August-September series of cases, and the cleansing proceedings included transference of the contents of these cesspools to a hole newly dug in the garden some 40 feet from, on higher ground than, and in the line of natural soakage to, the particular well which has been called in question. Now the main outburst of the fever did not, as will be seen from Table II., occur until the second week of December, soon after the commencement of this cesspool emptying. Then, be it observed, and not till then, did any notable extension of fever in the terrace take place; and this, notwithstanding that the whole A series cesspools must be regarded as having fostered, ever since August, material presumably capable of causing enteric fever. The inference is not to be avoided, namely, that this exceptional transference of cesspool contents to a hole in the ground near the particular well speedily brought about specific pollution of the well water, and thus occasioned the sudden outbreak of enteric fever among persons using that well water.

Certain subordinate considerations remain to be noticed. They do not affect the above conclusions though they may have interest for the etiologist. It will be observed from Table II. that, allowing for the incubation period ordinarily observed in enteric fever, this outbreak followed very quickly on the procedure which is believed to have fouled the well. It would seem therefore that, either highly potent infective matter transferred from the cesspools to the soil of the garden passed at once into the well; or, in this particular outbreak, the interval of time between the occasion of infection and the first symptom of illness was in many persons abnormally shortened. Shortening of the incubation time may no doubt have occurred. It would be in accord with experience of certain milk outbreaks of enteric fever where consumers of large amounts of the implicated milk in a raw state have seemed to suffer fever within a very few days of their infective meal. And what is true of enteric fever conveyed by milk may be true also of enteric fever conveyed by water, for in both instances there is chance of infective matter of great potency getting applied directly and in abundance to the intestinal tract. In this outbreak there was in many cases the usual difficulty in exactly fixing the date of attack, but so far as I have been able to

ascertain by personal inquiry case by case the early attacks occurred as follows:—

Doubtfully on or about 4th December, 7 days after commencement of emptying of cesspools - -	1 case.
In three days, 8th to 10th December, 11 to 13 days after commencement of emptying of cesspools -	12 cases.
In three days, 11th to 13th December, 13 to 17 days after commencement of emptying of cesspools -	5 ,,

The above facts are not, it will be observed, inconsistent with shortening of the incubation period, as regards the earlier cases, though abridgement of that period is not absolutely requisite for their explanation.

Upon the whole I am indisposed to accept such explanation, believing rather that infective matter passed directly to the well on, or within a few hours of, the 27th November; and for the following reasons:—The freshly dug hole in the garden to which cesspool contents commenced to be transferred on 27th November was situate, as has been said, some 40 feet from the particular well, upon higher ground, and in the line of natural soakage to the well. No doubt therefore the relative positions of the cesspool deposit-hole and the well, and the porous character of the gravelly soil intervening between them, were physical circumstances conducive to rapid passage of cesspool-derived liquid from the newly made hole to the well, though the interval of 40 feet, that had to be traversed by this liquid in getting to the well, seems at first sight to almost forbid belief in fouling in this way of the well within a few hours of commencement of cesspool emptying. But there are other circumstances to be taken into account before a decision is arrived at. From the plan it will be seen that the hole freshly made in the garden for the reception of cesspool contents was dug against a wall that runs toward and within three and four feet of the particular well, and that nearly midway between this hole and the well the suction pipe of pump No. II. passes immediately beneath the foundation of the wall on its way to the well. It canot be doubted that we have here special facilities for rapid passage of foul fluid from the recently removed cesspool contents to the particular well. Fluid matters poured against the wall would travel towards lower ground most readily and quickly along the foundation of this wall, and could be thus led in the direction of the well; and further, upon reaching a spot nearly midway between this starting point and the well, such liquid matters could gain access to the trench in which the suction pipe of pump No. II. had originally been laid, and following this new course alongside that pipe would be conducted directly into the well. Whether or not the above was the course actually taken by foul liquid matters soaking from the cesspool deposit-hole to the well cannot now be determined. Mr. Freeman sought to put this surmise also to the test, but he failed for the reason that the plumber who had meanwhile been employed in laying on the Norwood Water Company's supply to the terrace, had removed the suction pipes of the wells. In removing the suction pipe of pump No. II. the interval of ground between the cesspool deposit-hole and the well had become so greatly disturbed that trustworthy evidence on the above point was not to be had.

No. 12.

App. A. No. 12.

On Enteric Fever at Sherborne; by Dr. Blaxall.

On a Limited Outbreak of Enteric Fever at Sherborne, Dorsetshire; by Dr. F. H. Blaxall.

In pursuance of instructions from the Board, I visited Sherborne on the 20th April to make inquiry into an outbreak of enteric fever reported to the Board by Mr. Chandler, Chairman of the Local Board, and the Reverend E. M. Young, Head Master of Sherborne School, as having occurred in the town and in the "school house." [I had on a previous occasion (1873) inspected Sherborne in connexion with a severe and fatal outbreak of enteric fever there.]

The fever, it appeared, had invaded three houses: one the school house, the others two adjoining houses (Mr. Adam's and Mr. Downe's) on the Parade, at the corner of Cheap Street and Half Moon Street. Also that a case of a doubtful nature had occurred in Mr. Dawson's house in Cheap Street. This case was attended by an unqualified man residing at Yeovil, I was therefore unable to get any reliable information respecting it. Mr. Adam's household consisted of 10 inmates, of whom two, aged respectively three and 16 years, were attacked on the 7th March, and a third, aged 21 years, on 21st March. The servant also was taken ill and sent to her home, but she is said not to have had fever. Mr. Downe's house contained only two inmates, one of whom (a young man) was attacked on 25th March. The school house is the residence of the head master and other masters, and of 81 pupils: with servants it has a total of about 100 inmates. Here six cases occurred amongst the pupils. One on or about the 7th March, two on the 14th of March, and one on the 1st, 5th, and 7th of April respectively. The school was broken up on the 11th of April, a week earlier than the regular Easter vacation, and I hear of no fresh case occurring amongst the pupils since they went home. In all, this limited outbreak was marked by 10 cases in three households. The cases were typical in character, but generally of a mild form, and none have proved fatal.

The head master informed me that throughout the term he had observed many residents at the school house to be out of health, looking sickly and pale, and some having diarrhœa or sore throats. Inquiry into the several channels by which enteric fever is usually spread went to show that the only community of circumstance peculiar to the infected houses in contradistinction to the rest of the town was their water supply, which was derived from a different source from that of the town supply. This latter is from a deep well, the water of which is pumped up to a reservoir, and thence distributed to the various streets; whereas the infected houses obtained their water from the "Abbey Spring," situated in "Kennel Barton," in the Combe Valley, about a quarter-of-a-mile above the school house. The spring derives its water from the surrounding hills of inferior oolite. The subsoil is charged with water standing at about the level of a small stream which runs through the barton. A basin has been sunk to the depth of eight or ten feet and the sides cemented, and from this basin the water is conveyed by pipes to an hydraulic ram at the school premises. The water is in part forced up by this ram to a large tank on the roof of the school house, and the remainder (including that part which gives water-power to the ram, but is not raised by the ram) passes on by gravitation from the ram receptacle to a small cistern in a rockery opposite the front door of the school house; and from hence it is led to a conduit on the Parade in Cheap Street.

The Medical Officer of Health after due investigation, attributing the outbreak to the drinking of this Kennel Barton water, lost no time in advising that its use should be discontinued, and the town water laid on

in its place. This was accordingly done, and there has been no fresh case since.

It will be convenient to consider the course of this Kennel Barton water supply under three sections.

The first extends from the intake to the ram, and furnishes the water supply of three families, including nine adults and fourteen children, besides five or six children daily visitors at the house of one of the three families. Moreover from this section an indefinite number of school boys are supplied with water by a branch pipe led from the water main, before it reaches the ram, to the outside wall of the school house, where it is accessible to the whole school, numbering about 300 pupils, who are said to drink of the water freely.

The second section is included between the ram and the conduit, and supplies four houses, or about 117 persons, namely, the residents in the school house, in Mr. Adam's and Mr. Downe's, and in another house.

The third section is the conduit itself, which is resorted to by passers by, while certain families habitually send to it for their drinking water in preference to using the town water, which is sometimes turbid and discoloured.

With regard to the characters of the Kennel Barton water:—The gathering ground is in part occupied by streets, and is exposed to serious pollutions from houses and farmyards. I observed near the intake a very offensive collection of liquid manure. Further, three sewers here converge and empty into a sewer which runs through the barton, and was specially mentioned by me in my Report of 1873 as being of insufficient capacity to carry off the volume of sewage discharging into it. A sample of water taken from the intake basin was recently submitted for analysis, when it was found to give evidence of much organic pollution, and is described as a "somewhat dirty water," and "in its present state unsuitable for potable purposes" (*see* Note I.). Thus there can be no question that the water is far from being a proper water for drinking purposes. At the same time this pollution of the water at its source cannot be considered to afford an explanation of the special outbreak now in question, seeing that the fever cases were not distributed generally amongst the persons who drank of the water throughout its course, but were limited to three out of the four houses supplied with water from a particular section of it, namely, from the section between the ram and the conduit. This marked limitation in the incidence of disease pointed to some specially localised impurity of the water. Upon careful examination of the local circumstances capable of affecting the water here, I came to the conclusion that in this particular part of its course, the water had exceptional opportunity of being infected by sewer air before it was used for drinking.

The drinking water of the school house is derived from cisterns which also supply the water-closets. They receive their water from the large tank already mentioned as filled by hydraulic power, two of them are placed over the boys' closets at one end of the dormitory passage on the first and second floor, and the third over the servants' closet in another part of the house. Adjoining the boys' closets are the housemaids' sinks, and here are taps in connexion with the closet-cisterns; the sinks have pipes leading down to the drains, while overflow pipes from the cisterns discharge over them. At the time of the Medical Officer of Health's inquiry these sinks were very offensive. The water in the cisterns was thus exposed to a two-fold danger of sewer air gaining entrance into it, namely, from the closet-pan and from the sink. It was from these taps at the housemaids' sinks that the boys' washing jugs were filled. Later on, after the town water had been substituted for the spring water in the school, comparative analysis was made of that

water (1) before it entered the boys' closet-cistern, and (2) as it was delivered from the cistern, and the analysis went to confirm the belief that there had been local contamination of the cistern water by organic matter. (*See* Note II.)

The pipe which supplied the school house with the water that was meant for drinking was led from the cistern over the servants' closet to the scullery, while the overflow pipe discharged into the open air. To what extent, if any, this lessened the danger of contamination to the water one cannot determine, but it is worth noting, inasmuch as no case occurred amongst the 19 masters and servants, whereas six cases occurred amongst the 81 pupils, and it is in evidence that the boys were in the habit of drinking water from their jugs, especially three of the sufferers. It is to this channel that the cases among the boys may with probability be attributed. [The question may arise as to whether the cases may not have been due rather to sewer air gaining entrance to the dormitories. The distribution of the cases militates against this opinion. The passages are 118 feet long by 3½ wide. The cases occurred in separate rooms, two only being situated near the closets, whilst the remaining four were well removed.]

With regard to the three other houses, they also are served from the part of the service that I have called the second section. The pipes conveying the drinking water were in direct relation with the closet pans of these houses. A branch pipe was led to each house from the pipe which afterwards discharges into the conduit, going first to the water-closet and then terminating at the tap whence the drinking water was obtained; thus the water lay dead between the closet and the tap. The closet pans were very foul, affording evidence of ineffectual flushing, for although water was always running into them the stream was small, while the pipes being open afforded great facility for the air of the sewer being sucked up into them, and so brought into direct contact with the dead water in the pipes which would be drawn for drinking purposes, occasionally after many hours' exposure to this pollution. The only house of the four which escaped infection was occupied by five people varying in age from about 34 to 75 years, none of whom drank water. On the other hand the infected families were water drinkers.

At the conduit the water was always running, so that, if any closet-air ever passed backwards from the three houses towards the conduit stream, there was but little danger of serious contamination to the water of the third section, that in the conduit. Probably this is the explanation of the freedom from disease amongst those who obtained their drinking water at the conduit.

The Surveyor and Inspector of Nuisances assured me that these four houses were the only ones in the town in which the dangerous connexion, here described, existed between the waterclosets and the drinking water.

The limitation of the fever to the few houses in which this defect exists points, I think, very significantly to the drinking of water contaminated by sewer air as the channel by which the disease was spread. Further, the evidence of the medical men established the fact that antecedent cases of enteric fever had existed in the town, affording opportunity for specific pollution of the contents of the sewer.

It appears that the town had been singularly free from enteric fever for many years until December last, when a case came under Dr. Davies's treatment that had been contracted at Yeovil, whither the sufferer went in good health in November and returned home on the 9th of December ill with enteric fever. A second case came under Dr. Davies's care on the 24th of the month, but he was unable to learn its origin. A third case came under Dr. Williams's notice on the

11th February. The sufferer was a young gentleman, one of a family of eight including father, mother, four children, and two servants. He left home on the 19th January for one night, returning on the following day. On the 4th February, *i.e.*, 15 days afterwards (a period corresponding with the period of incubation of enteric fever), he complained of feeling unwell, and on the 11th, being much worse, Dr. Williams was called in. No other case occurred in this house or locality, and there can be little doubt that the fever was contracted the night he slept from home. The evacuations of the first sufferer were disposed of in a privy pit or buried, but the water in which the infected linen was washed went to the sewer. As regards the two succeeding cases, in one instance the bowel discharges were disposed of in a watercloset without disinfection, and so passed to the sewer, but in the other, after Dr. Williams was called in, the precaution of disinfecting the evacuations was observed. The sufferers all resided in the upper part of the town; the first in Cold Harbour, the second in St. Swithin's Street, and the third on Green Hill. The drainage from Cold Harbour and St. Swithin's is conveyed by sewers down Cheap Street, one on either side of the road, east and west. These sewers run a steep course till they reach Half Moon Street, when the west sewer immediately after receiving the drain pipes from Mr. Adam's and Mr. Downe's houses, on its way through a passage called Bow, joins the east sewer and forms the Half Moon Street sewer, which is very flat and very badly ventilated, and the Surveyor tells me it is subject to considerable deposit of sewage mud in it. Here it is worthy of note that in the early part of the year, January and February, the rainfall was very inconsiderable, so that the filth would have accumulated in this sewer to a very great extent, till on the 21st February, by the advice of the Medical Officer of Health, the sewers were cleansed. They had not previously been flushed since the preceding summer. The flushing is effected by damming the contents of the sewer at various places so that they fill with liquid, which is then rapidly discharged. But by this means the foul air is driven out at any weak traps or available openings, whether closet pipe or sink, and in this way there seems little doubt the specific pollution of the water was brought about, for it is a significant fact that two houses were simultaneously invaded about 7th March, 14 days after the flushing of the sewers.

In 1873 a wide spread and fatal epidemic in this town was traced by me to the direct communication then existing between water-closets and water mains, and the present outbreak affords a second illustration of similar evils appearing to result from the self-same cause.

On this occasion the outbreak was of very small dimensions, and this is a fact that is both instructive and satisfactory. For the Sanitary Authority has in recent years taken much pains to give effect to the recommendations that were the outcome of my former inspection, with reference specially to providing service-cisterns for flushing closets and to ventilating the sewers. The present small outbreak has occurred in just those few houses where efficient amendment had not been made in the water service and which were in connexion with a sewer remaining ill ventilated. For the rest, the operations of the Authority have resulted in marked improvement in the public health, for whereas formerly mortality from enteric fever was of annual occurrence, during the last eight years, since the carrying out of the measures above referred to, deaths are recorded in one year only, as will be seen by reference to the subjoined table; and this immunity from fever is confirmed by the testimony of the medical men. It may perhaps deserve mention that diarrhœa also exhibits a decrease, the deaths during the six years, 1868–1873, averaging 3·7 annually; while in the eight years, 1874–1881, they have numbered only 2·25 on the average of years.

App. A. No. 12.

On Enteric Fever at Sherborne; by Dr. Blaxall.

TABLE of MORTALITY from Enteric Fever for a period of 14 years abstracted from the Registrar General's Death Returns.

Year.	1868.	1869.	1870.	1871.	1872.	1873.	Total Deaths in the Six Years, '68–73.
No. of cases -	1	2	4	8	2	22	39

Year.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	Total Deaths in Eight Years, '74–81.
No. of cases -	—	2	—	—	—	—	—	—	2

I attended an informal meeting of the Sanitary Authority, when I communicated to them my views as to the origin of the recent limited epidemic. I advised that the sewers should be thoroughly disinfected, the ventilation of them improved, and better provision made for flushing them; also that means should be provided for filtering the Board of Health water before delivery to consumers, and that every precaution should be taken to protect drinking water from pollution by sewer air or otherwise, and I urged that the drinking of water from sources so liable to contamination as the Kennel Barton spring should be discontinued. I further took occasion to point out, by reference to the death returns, that from time to time scarlatina had proved very fatal, and I showed the desirability of making suitable hospital provision for the reception of cases.

6th May 1882.

NOTE I.

The Metropolitan Laboratory,
32, Holborn Viaduct, London, E.C.
April 8th, 1882.

ANALYSIS of a SAMPLE of WATER received from the Rev. E. M. Young, M.A., (per C. Cleminshaw, Esq.,) April 3rd, 1882, labelled "Water from Spring supplying Tank in School-house."

	Results expressed in	
	Parts per 100,000.	Grains per gallon.
Appearance in 2-foot tube - - - -	Turbid.	
Smell when heated to 100° F. (37·7° C.) - -	Slight.	
Chlorine in chlorides - - - -	2·00	1·40
Phosphoric acid in phosphates - - -	Traces.	
Nitrogen in nitrates - - - - -	·3706	·2594
Ditto, equivalent to nitric acid - - -	1·6677	1·1674
Ammonia - - - - - -	·0196	·0137
Albuminoid ammonia - - - -	·0442	·0309
Oxygen absorbed in 15 minutes at 80° F. (26·6° C.)	·0440	·0308
Ditto, four hours - - - - -	·0840	·0588
Hardness in degrees, Clark's scale, before boiling -	28·74	20·11
Ditto, after boiling - - - - -	5·29	3·70
Total solid matter dried at 220° F. (104·4° C.) -	39·40	27·58
Microscopical examination - - - -	Decayed vegetable matter, a few monads, some mineral matter.	
Poisonous metals - - - - -	Absent.	

Observations.—This is a somewhat dirty water and contains too much organic matter. This, however, appears to be chiefly in suspension, and I am of opinion that it is of vegetable origin, and is not derived from sewage contamination. In its present state it is unsuitable for potable purposes, but would probably be greatly improved by efficient filtration. The total hardness might be reduced to a great extent by treatment with lime.

(Signed) H. S. Carpenter, F.C.S., &c.

Note II.

Analysis of two samples of water from the school house, Sherborne :—

A. Direct from the town main.

B. From the housemaid's tap in the closet on the second floor drawing from the cistern supplied with the town water.

Appearance in 2-foot tube :—

A. Clear, slight greenish tinge.

B. Do. do.

One gallon of each sample yields—

	A.	B.
	Grains.	Grains.
Free ammonia	0·	0·003
Albuminoid ammonia	0·	0·001
Chlorine	1·05	1·12
Nitrogen (as nitrates)	0·	0·
Total solid matter	25·2	25·9
Iron	Slight trace.	Slight trace.

The town supply is a very good water and quite free from contamination. The sample from the cistern gives decided evidence of having absorbed a small amount of sewer gas through the overflow pipes.

(Signed) W. F. Donkin.

St. George's Hospital,
April 18th, 1882.

No. 13.

On the Occurrence of Anthrax amongst Persons engaged in the London Hide and Skin Trades; by Mr. John Spear.

This inquiry was decided upon on the receipt of a communication from Mr. Payne, Her Majesty's coroner for London and Southwark, in which the attention of the Board was asked to the occasional occurrence of malignant pustule amongst men engaged in the hide-warehouses and tan-yards of the Bermondsey district.

On commencing the inquiry I found that amongst those engaged in the trade the disease in question was generally attributed to mineral poisons (arsenic or corrosive sublimate, for analyses *vide* appended note D.) believed to be often used in the cure of the hides; and the verdict of a coroner's jury had shortly before been recorded to that effect. This view, however, apart from its want of accord with our knowledge of the effects of such poisons, had been sufficiently disproved by observations carried out by distinguished clinicians and pathologists at Guy's Hospital. In that institution a number of the cases had been treated; and their identity with malignant pustule, one of the clinical varieties of anthrax—a disease primarily of the lower animals—had been satisfactorily established. This disease, in connexion with its occurrence amongst woolsorters in the worsted manufacture, had been, it will be remembered, the subject of extended inquiry on behalf of the Board in the year 1880; and the present report may conveniently be regarded as a sequel to the one of that date.*

I propose now to deal with the subject under the following heads:—

I. The London hide and skin trade; its extent, and the nature of the operations in the raw material.

II. The disease (with the circumstances of infection).

III. The preventive and remedial measures that suggest themselves.

I. The Hide and Skin Trade.

1. Extent, &c.—Various statistics as to imports and exports, &c., I have placed in an appended Note (A.). They are derived partly from the Customs' returns, and partly from private sources, and will afford some indication of the extent to which hides and skins are dealt with in this country.

Description of the Raw Material, Sources of Supply, &c.: Foreign Hides.—The term "hide" is applied exclusively to the skin of larger animals, mainly of the ox genus, but including also the camel, the horse and others of the pachydermata. The collection of foreign hides is effected mostly through travelling agents, who purchase at local markets and bazaars, and forward the parcels to the nearest port. There the hides undergo a rough classification. First, according to the market for which they are best suited—English, Continental, or American; and secondly, (although this classification is not always carried out) according to their quality. "Dead" hides, *i.e.*, those of animals that have died of disease or of age (the latter a frequent occurrence in countries where oxen are mainly used as beasts of burden), are placed in this case amongst the inferior qualities, technically termed the "rejected," and sometimes they ostensibly form a class apart. Such

* Report on the "Woolsorters' Disease" in the Annual Report for 1880 of the Medical Officer of the Local Government Board.

hides are of some special interest for the purposes of this inquiry since they will probably include those to which danger of infection attaches. From some countries, however, for the reason above indicated, they form a large proportion of the total number exported; and in such case the significance and utility of the distinction is obviously greatly diminished.

The *curing* process, technically spoken of as either "wet" or "dry," is carried out by the natives. The hide is first "trimmed" (the head and tail "piece" being removed) and washed, although the cleansing, as shown by the frequent appearance of dried blood, &c., is by no means perfect.

Subsequent steps in the "dry" cure vary in different countries and localities. The hide may be simply dried in the wind and sun in a place protected from too scorching rays (as in some parts of South Africa, of the West Coast of South America, Singapore, Penang, Java, Batavia); but it is usually first subjected to some chemical application, designed partly to assist in the cure, and partly to protect from the ravages of the "worm" (*Dermestes Vulpinus*). Thus it is steeped in a bath of brine (North West Provinces of India); or salt, or earth largely impregnated with nitre, &c., may be rubbed into the fleshy surface (parts of Bengal, Madras, and Bombay); or it is washed over with petroleum (Rangoon and Penang); or with a solution containing arsenic, and probably other chemical substances (China, and some parts of Bengal).* Many of the hides from Bengal are thickly coated with the mud of the country, apparently with the three-fold object of assisting in the cure by the salts which the mud contains, of protecting the hide from the too scorching rays of the sun during the drying process, and of adding factitiously to the weight. Those from Bombay again are brushed over the fleshy surface with a solution of lime.

When completely dry the hides are hard and horn-like, they are folded lengthwise, generally with the fleshy surface outwards; and after classification at the port of shipment as I have described, are packed in bales and forwarded, as part of a mixed cargo, to their destination. A bale contains, as may be anticipated, a very varying number of hides (from 50 perhaps up to 200). It is generally packed under hydraulic pressure, and is bound together by rope or iron bands. The bales from Madras come, however, covered with canvas; and in the case of a few shipped from Calcutta the outer hides (wrappers) are chosen from the inferior qualities, possibly from "dead" hides, so that the loss may be less in case of injury.

In curing by the "wet" process, powdered rock-salt is rubbed into the fleshy surface of the washed hides; or the latter may be thrown warm from the slaughtered animal into a strong brine. Later they are "stacked," *i.e.*, spread out one above the other, with a liberal sprinkling of rough salt between each layer. Liquid, extracted from the animal matter by the salt, runs from such a heap of hides, but the latter remain moist or "wet" for an indefinite time. A strong salty animal odour is always perceptible, but that of decomposition, as in the case of the dry hides, is generally absent. "Wet" hides, "stacked," as I have described, in the holds of vessels, are imported from South America (being in that case usually the sole cargo); they come also, sometimes rolled in bundles and sometimes loose, from Australia, South Africa, and the Continent.

Foreign (or Colonial) Skins.—The supply consists mainly of the skins of sheep and goats; but includes also those of other of the

* One large exporter at Shanghai dips, I understand, all his hides into a weak solution of "Cowan's specific" (arsenical).

smaller ruminants; of rodents (especially rabbits), and of many of the carnivora. These skins, the vast bulk of which comes from Australasia and South Africa, are almost all sun dried; although salt, or arsenical solutions, applied to the fleshy surface, generally assist in their preservation. They arrive in this country tightly packed in bales, with or without a canvas covering; very exceptionally they come as "pelts," *i.e.*, with the wool or hair removed.

"Dead" skins of the sheep and goat are not, so far as I can ascertain, so common. It may be that the wool or hair, which has some value, is removed rather than the skin, in the case of death by disease; and this is the more likely as the skin itself is often of so little value that, if of very inferior quality, it would scarcely be worth the cost of carriage. The skin of the Van goat, the fleece of which appeared to be the most frequent source of infection in Bradford, is little known in London; and goat skins generally are not dealt with to any very great extent in England (*vide* Imports and Exports, appended note A).

Hides and Skins of Home Production.—These arrive at the tanneries or the fellmongers' yards fresh from the slaughter-houses or knackeries, or intermediately from the skin-market, and are then known as "market" hides or skins; or when sent from a distance they are slightly salted, then folded or rolled in bundles. They come uncleansed from blood, dung, and other impurities; and to the hides of oxen the horns are still attached. Any advanced decomposition of the skin spoils it for tanning purposes, but putrefactive odours are sometimes unpleasantly perceptible, and in the summer swarms of flies are attracted; this, however, being much more apparent in some yards than in others, is perhaps rather due to neglect of surface cleanliness. The hides of foreign cattle (mostly from Spain and America) slaughtered at Deptford, as well as those (mostly from the Continent) slaughtered at Islington, are sent fresh, day by day, to the Bermondsey Hide and Skin market, and are thence distributed to tanners in various parts. The Superintendent of the Deptford market informs me that no case of anthrax has, so far as he is aware, occurred amongst cattle landed there; and that all hides, horns, &c. sent from the market are "disinfected."

Horse hides are not dealt with to any large extent in London, and are mainly exported to the Continent.

2. The Manipulation of the Raw Material in this Country. *Foreign Hides and Skins.*—Vessels conveying hides and skins to the Metropolis unload at one of the London docks; or, if coming from Continental ports, perhaps in the river into barges, or at one of the riverside wharves. At the docks the hides are never stored, although skins may occasionally remain for some time, for there is little accommodation for them. They are, indeed, usually discharged from the vessel "over the side" (*i.e.* the side opposite the quay) into barges; and in any case, unless intended for immediate transhipment to Continental ports, are soon on their way in barges to the wharves in Tooley Street, on the opposite or south side of the river. Some of these wharves are in the hands of hide-brokers, and are then devoted to the reception of such goods. Others are, however, made use of, and then care is not always observed to keep hides, &c., apart from general merchandize.

If the goods have not already been examined on behalf of the Customs this is now done; a bale here and there being opened in the presence of the officer.

Should it be intended to "sort" the hides or skins this process is proceeded with—on the wharf usually, in the case of "wet" hides; in the case of "dry" hides and skins, in the neighbouring warehouses of

the brokers to which for the purpose, and for the purpose of storage, the material is now removed.

A truck load of hides is placed before the sorter; he, with the assistance of a labourer standing opposite to him, opens each hide, estimates at a glance its weight and quality, and throws it to the appropriate one of the several heaps that are accumulating around.

There are only some thirteen regular sorters in the London trade; and their duties being various (having for example to sort *tanned* hides and skins, of which vast quantities are now imported) they are probably not employed a third of their working time upon the actual handling of the raw material. Each one, however, when engaged in sorting raw hides, is assisted in a regular way by a gang of seven labourers; viz., two to open the bales and to load and bring up the truck; one to open the hide with the sorter, as above described; two to tally (count, weigh, &c.), and two to "stack" the sorted hides and to lay out samples for the inspection of purchasers. When sold, and before being carted away, the hides are generally again packed in bales—a work in which the same labourers are employed.

In sorting skins somewhat less assistance is required.

When some classes of dry hides are being dealt with, and generally with skins, there is comparatively little dust, but when hides that are plastered as I have described with mud, lime, &c. are in hand, the amount is excessive. Small pains are taken, moreover, to avoid this; sorting often going on with a cloud of dust in a room where other men besides those in actual attendance upon the sorter are working, and where goods not of themselves so dusty, and which will have to be sorted, are stored.

The rooms are, as a rule, spacious and fairly well ventilated; but they are used as warehouse as well as sorting rooms, and too much space is often taken up by stored material. They are often also littered, to what would seem to be a needless extent, with dust, pieces of damaged hides, &c.

The process I have described above constitutes the legitimate and time-honoured method of the trade; but now, with certain classes of goods, to "sort" them has become a rare exception. Australian sheep skins are carefully classified before exportation, and the process here I am told is only repeated in about one-sixth of the import. Amongst hides, Calcutta "kips" (constituting by far the greater portion of dry hides), and Chinese hides, are now mostly sold in "original" bales; any sorting that may be necessary being carried out after the preliminary tanning operations.

In such cases then only a comparatively very few bales of a consignment will be opened, a few for the inspection of the Custom House officers, and a few more for inspection by the buyer, before the material is distributed to tanneries or fellmongers' yards as the case may be.

The operations of the tanner and the fellmonger are fully described in Dr. Ballard's report on "Effluvium Nuisances" in the Annual Report of the Medical Officer of the Local Government Board for 1876. The first processes, all that concern this inquiry, are thus spoken of:—

Tanning.—(1.) *Fresh English* (*Market*) *Hides.*—The horns being removed, "the first process is 'liming.' A tanner has in his yard a "series of lime pits which are worked in shifts. They are usually in "series of three, the first being an old pit, the last being a pit of "newly-made milk of lime, and there is one intermediate. The hides "to be limed are first laid one above another in the oldest of the three "pits. It is called in the trade 'backward lime,' and is therefore the "weakest (or the least caustic) of the shifts. Here they remain about

"two days. They are then removed into the intermediate pit, where "they remain about three days, and then into the fresh lime, where "they remain another three days at least. Some tanners prolong the "liming process considerably beyond this period. The milk of lime is "made with 6 to 10 bushels of lime to the pit" (a pit containing some 600 gallons of water). "During this process the hides are "'hauled' daily. The 'hauling' consists in two men drawing out each "hide separately with hooked instruments, laying the hides one above "another at the edge of the pit, and then putting them back again. "This is done to secure an even action of the lime. The exhausted "lime pit is then emptied, the water being run or pumped out, and the "deposit laid in a heap in the yard until it can be taken away."

"(2.) *Salted Hides.*—These are treated in the same way as "'market hides,' except that they are usually first soaked for a day or "two before liming to get rid of the salt."

"(3.) '*Kips,*' (*i.e., Dry Foreign Hides*).—These come to the tanner in "bales and as hard as a board. Before being dealt with, therefore, they "must be softened. For this purpose they are put into pits of water "called 'soaks,' where they remain until they are sufficiently softened to "allow of further manipulation. Nearly all the kip tanners I have "spoken to tell me they prefer to use 'old soaks,' that is to say, the same "water is used without renewal over and over again for successive lots of "kips. Fresh water, however, is added when necessary." (Sometimes there is a series of soaks, the hides being changed from one to another as in the lime pits. Hooked instruments are used for this work, as for "hauling." The water of a "soak" may be changed daily or weekly or even less often). "They, the hides, then go to be 'stocked,' "that is to say, they are beaten with heavy hammers, like cloth stocks, "while a spray of water plays over them . . . . From the stocks "they go to the lime-pits, but being of thinner texture than English "hides, weaker lime is used."

Subsequent stages of the tanning process will be found described in Dr. Ballard's report; but as it can scarcely be supposed that infectious property of the hides could resist the prolonged application of caustic lime in the lime pits, it will be sufficient to enumerate them here:—1. The thorough scraping of the hide on the hairy surface, "unhairing;" on the fleshy surface, "fleshing." 2. Soaking in water, and in some cases in ammoniacal liquors, to remove the lime and to still further soften. 3. Prolonged immersion in the tan liquors.

The Fellmonger's Trade.—I obtained no record in the course of my inquiry of any case of anthrax amongst fellmongers, or leather-dressers; and this may probably be explained by the facts already stated as to the trade in foreign skins.*

At the wharves, however, two or three cases of infection, apparently originating in the handling of skins, occurred, and, as there is nothing in the nature of the first processes of the fellmongers' trade calculated to protect the workmen if infection be present, their occasional injury must be anticipated. This will be seen by the mere enumeration of the processes to which foreign skins are subjected. Sheepskins: 1. Soaking in water in order to soften the skin (in country places this is often done in running streams). 2. "Burring," *i.e.*, removing the

*The death of a fellmonger's labourer from "internal anthrax" was reported during the inquiry; but at the post-mortem examination that I was allowed to make the diagnosis was not confirmed.

"burrs" which stick to the wool (effected partly by machine and partly by hand). 3. "Tainting," *i.e.*, producing in the damp skin, placed in a warm chamber, incipient decomposition, so that the pulling off of the wool is easily effected.* 4. "Pulling," *i.e.*, removing the wool. 5. Soaking the skin (now the "pelt") in milk of lime, preparatory to sending it to the leather dresser; and drying the wool in a hot air chamber before sending it to the woolstapler.

English skins and goat skins are somewhat similarly treated, except that "liming," *i.e.*, brushing cream of lime over the fleshy surface, which in a little time serves to loosen the attachment of the wool or hair, takes the place of "tainting."

A process by which sheep and goat skins are made into mats need scarcely be described, since the very best of skins, not likely to be from diseased animals, are selected for this purpose.

There are numerous minor articles of the hide and skins trades, besides what may be termed residual products; but space will scarcely permit more than an enumeration of those that seem to be most important in connexion with this inquiry.

Rabbit skins are imported in enormous numbers from Australia and New Zealand. From a certain class a common sort of fur is manufactured, the longer hair being first pulled off (unhairing). This operation is done largely by females; one of whom was the subject of an attack of anthrax that came under notice in the course of this inquiry. The fur of the rabbit is also largely made use of for the manufacture of felt hats, felt carpets, frieze, &c.; the "pelt" is reduced to gelatine and size.

"*Trimmings*" of hides, "faces," tendons, and odd parts of the skin are imported in large amount. They go to the glue and gelatine manufacturers.

Foreign Horns, Hoofs, and Bones, of which large quantities are imported, are apparently perfectly dry and free from odor, for it is said that if wet shippers are careful not to receive them. They come either in bags or loose in the holds of vessels, and like the hides are conveyed in barges to the wharves and warehouses in Tooley Street. They undergo a rough species of classification, a work performed by labourers, according to the purposes for which they are intended. Parts of the horns are converted into imitation tortoiseshell combs. Suitable portions of the long bones, into bone handles, bone buttons, &c.; the hoofs into imitation tortoiseshell; while parts not suitable to any of these purposes go to the manufacturers of size, animal charcoal, and artificial manures.†

The *By-products* of the tanneries, and the *Refuse* and dust of the latter and of the hide warehouses, have again various destinations. The "parings" and "fleshings" of the tanner are sold to the gelatine or size manufacturers; the hair, to the felt manufacturers or plasterers. The dust of the warehouse rooms, and the general refuse of the tanneries, including the sludge taken from the wash-tanks and "soaks," pass often direct to the farmers as manure. The fouled water of "soaks" and

* From what is known of the life-history of the anthrax bacillus, this process of "tainting" may be regarded as well calculated to produce first the germination of spores, and then the destruction of the organisms.

† The preparation of ordinary "superphosphate" would certainly destroy any contagium; this, however, is not the case with the manure known as "raw-bone meal."

wash-pits is discharged into the drains, or, in country places, into the nearest watercourse. Sacking is disposed of in various ways—for the stuffing of cheap upholstery, in the manufacture of paper, &c.*

II. Anthrax amongst Persons Engaged in the London Trade.

The different classes of person engaged in the hide and skin trade of the Metropolis, and the extent to which, so far as I have been able to ascertain, they have suffered from anthrax, may be enumerated, in the order in which they come into contact with the raw material, as follows:—

Classes of Persons.	Cases of Anthrax.
Stevedore	1
Dock labourers	None ascertained.
Bargemen	Do.
Custom House Officers (no necessary handling)	Do.
Wharf managers and foremen	1
Wharf labourers	9
Sorters	(Two doubtful cases).
Sorters' labourers (being also warehouse labourers)	11
Merchants (buyers) and masters of warehouses, &c.	1
Carters	1
Tanners	12 (all but one being labourers engaged in the first process).
Fellmongers	None ascertained.
"Unhairers" (rabbit skins)	1
Persons engaged in various other minor or subsidiary branches of the trade (glue, gelatine, felt, manure-makers, &c.)	None ascertained.

Other persons may occasionally, in the course of their avocations, come into contact with raw hides—railway porters for example. I have not heard of any cases amongst them.

Two cases, however, were treated at Guy's Hospital, as to which there is no evidence of the source of infection. One of these sufferers was the wife of a dock labourer, but the husband does not appear to have been working amongst hides. The other was a child; nothing is recorded as to origin of infection, and the attack occurred so long ago (1873), that it was thought useless to attempt to recover the history.

In the above enumeration I have not confined myself to any period, but have included such cases as seem to be sufficiently authenticated. In point of time they have occurred as follows:—

Years.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883. (9 months.)	10 Years and 9 months.
Cases.	4	—	1	—	2	3	1	1	8	14	5	39†

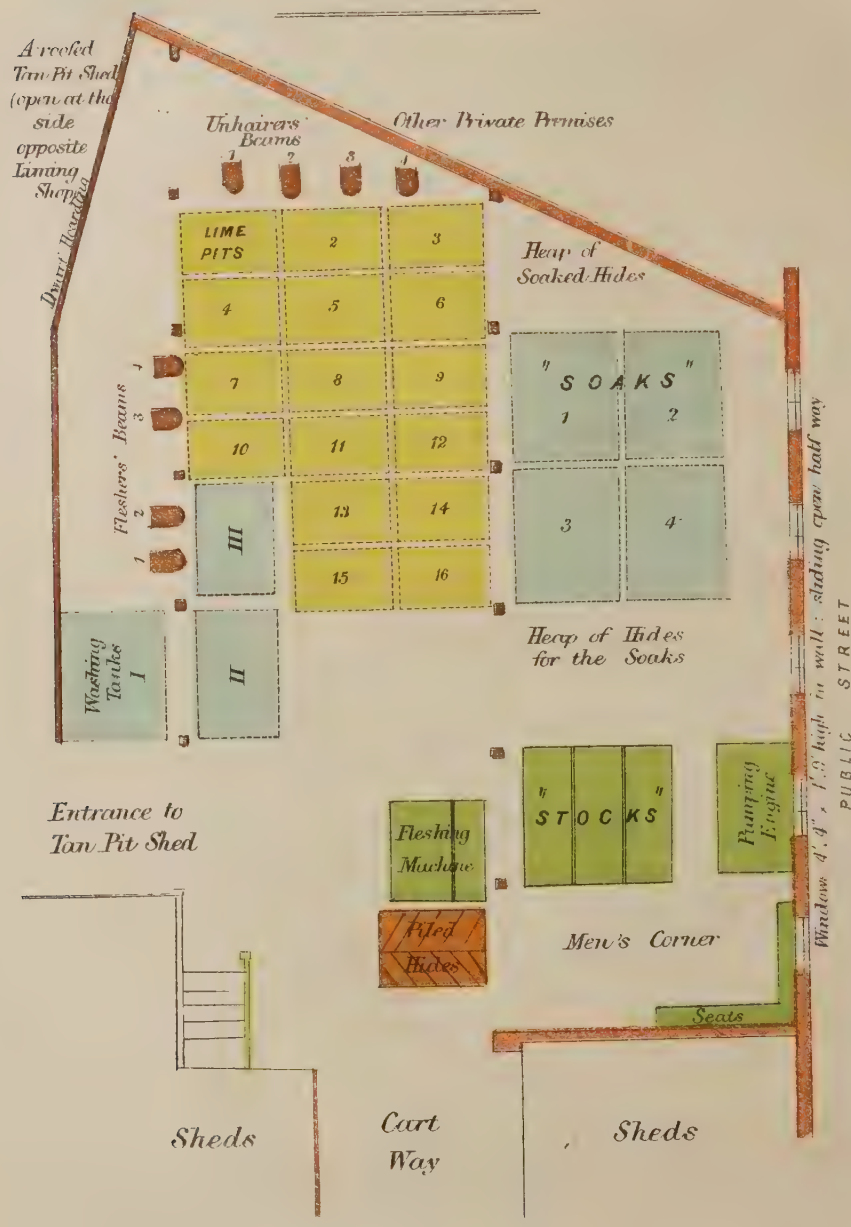
* An outbreak of anthrax amongst the workers in a paper factory in Lower Austria was heard of during this inquiry.

† Including two amongst persons not engaged in the trade, and as to which no evidence appeared of the mode or source of infection.

MESSRS. BARROW'S FOREIGN HIDE LIMING SHOP.

GROUND FLOOR OF TWO STORIED BUILDING

Height 10 feet



Scale 1/12 inch to 1 foot

DANCERFIELD. LITH 22. BEDFORD ST COVENT GARDEN 6374

Amongst the cases some important grouping was observed, the majority of those of recent date bearing evidence indeed of a common origin. In November, 1881, Messrs. Barrow Brothers, the largest tanners of foreign hides in Bermondsey, purchased through a broker 200 bales of what are known as "arsenicated China" (or Shanghai) hides. They arrived during the first half of January 1882, in three ships from Shanghai, in parcels of 35, 75 and 90 bales respectively; were discharged at the Royal Albert Dock, and conveyed in barges to "Butler's" wharf in Tooley Street. Thence the 35 bales of the first consignment were carted, unopened, on different days between January the 16th and February the 11th, to the tannery in the Grange Road.

They were deposited at the entrance of the liming shop (see accompanying diagram); and were there subjected, along with East Indian hides (a class constantly in hand), to the preliminary operations of tanning.

It was soon found that the Shanghai goods were of very inferior quality; the bales each contained, instead of about 80, over 100 hides; and a large proportion of the latter, besides being "light," were according to independent judgment, "dirty," "stale," "much tainted"; many were in fact "dead" hides.

As the bales were opened, the lightest hides, not suitable to Messrs. Barrow's trade, were set aside. On March 28th, 750 of these were sent to a broker's warehouse for disposal by public sale; and by the middle of April, when all the 35 bales had been disposed of, 250 more of the same kind, that had meanwhile accumulated, remained piled at the place indicated in the plan, waiting an opportunity of similar disposal.

As to the structural arrangements of this workshop, the part to the left is exposed to draughts, that to the right, where the "soaks" are situated, and where the first and most offensive process of tanning is carried out, is dark and close—defects which, owing to the proximity of the public street, are not easily remedied. Ventilation is further impaired when the entrance is partially occupied by a high pile of hides, and then, moreover, the men will often be working on the leeward side of possibly infective material.

Twelve or thirteen men are usually employed here, viz., six in soaking and liming (the men working indifferently at either operation), one at the "stocks," three at the "unhairing beams," two at the "fleshing" machine when this is at work, and two at the "fleshing beams." (Vide the plan). Before leaving the workshop the hides (now termed "butts") are finally washed, and are then examined by the foreman who decides to which of the various series of tan-pits they shall be removed. In these succeeding operations, those of tanning proper, some 200 men are employed by the Messrs. Barrow, but many other hides, English, Scotch, &c., besides those prepared at the workshop in question, come under their hands.

Between the end of January and the middle of April, whilst the Shanghai hides were being dealt with, six men employed in the workshop in question suffered from malignant pustule; three being attacked in January, two (both fatal cases) in March, and one in April; and amongst the large number of men engaged in the subsequent tanning operations one was fatally attacked on April 17. (Clinical records, &c., are in the appended Note B.; Cases 1 to 7 inclusive).

Five of the six men in the workshop were all known to have been engaged from time to time before and up to the date of attack in removing the raw hides to the "soaks," and in the case of four of them (the other was properly a "flesher") "soaking" and "liming"

formed their ordinary employment. The sixth worked at the fleshing machine, close by the piled hides. He would stand in the dust arising during their disturbance; with, it was remarked by his fellow workers, the side of the neck on which the pustule appeared turned towards the hides. The seventh man, the tanner, worked at an entirely different part of the premises, and in ordinary course would not come in contact with raw hides, but only with "butts." He might, however, it is said, have visited his companions at the workshop where the other cases occurred.*

Another workman, not in Messrs. Barrow's employment, but who was engaged in carting the Shanghai hides from the wharf to the tannery, suffered likewise, at the beginning of February, from a slight attack of the disease (Case 8).

It will be remembered that a number of loose "light" hides were sent to a broker for public sale, and that others were stored in the liming-shop waiting similar disposal. The former, without any more manipulation in this country than was necessitated by their removal, were exported to Italy—390 to Catania, 238 to Genoa, and 122 to Naples, thence to be distributed to various small tanneries in the interior. Of these I have as yet obtained no further information. The 250 hides that were stored in the liming-shop were eventually taken, no opportunity for sale offering itself, to be worked up in the tannery. A few days after the work was commenced, and whilst it was still in progress, on February 1st 1883, another man, who was engaged in putting the hides to soak, was seized with the disease. (Case 9 in appended note.)

A dispute had meanwhile arisen between the Messrs. Barrow and the brokers (the exporter at Shanghai having failed) as to the ownership of the remaining 165 bales of the two other consignments. Messrs. Barrow thought not to receive them, still it was decided to sell if possible.†

Accordingly, between February 23rd and March 6th, 1882, eight bales were sent as a sample to a commission agent in Paris. Six parcels were returned on the 24th of the following April on account, mainly, it appears, of the inferior quality of the hides, but with a rumour also of mischief caused by them. Afterwards there came a definite intimation to the effect that seven men, two of whom had died, were attacked by "blood-poisoning" after handling the sample.‡

The remainder of the goods were offered for sale from time to time, and intending purchasers occasionally visited Butler's wharf, where they were still stored, to look at them. Three bales were thus sold on October 5th, 1882, being sent by the purchaser in "original" (*i.e.*, unopened) to Palermo, and 10 more on November 9th, nine of these going to Leghorn and one to Leipsic, all in the "original." No mischief is ascribed to those sent to Palermo; of the others nothing has yet been heard.

---

* He stated to the surgeons at the hospital that a pimple, which he had been in the habit of picking with his nails, had for some time occupied the site of the pustule. The corner of the workshop marked "men's corner" in the plan, appears to be regarded somewhat as a rendezvous by the men. Those employed in the shop often take their meals here, and here their coats are hung up during work.

† The dissatisfaction was mainly due at this time to the obvious condition of the hides.

‡ The seven persons believed to have been infected include, according to my information,—a merchant who examined the hides at the agent's warehouse; two warehousemen (one being the man who re-packed the hides for return to England); and four tanners, the latter working at three different establishments. A local pustule seems in each case to have developed. The merchant, and the man who re-packed the hides, were those fatally attacked.

Messrs. Barrow have lately, June 1883, taken four or five more bales to their tannery, and during the same month 25 were removed to the brokers warehouse and sorted there. In these cases it has been explained to the men that the hides were suspected, and any sign of infection was watched for with the object of taking prompt curative precautions; no ill results have however followed.

At Butler's wharf the men were not so fortunate. On July 25th, 1882, a labourer was attacked by malignant pustule; another labourer on August 8th, and the manager of the hide department in December. (Cases 10, 11, 12, in appended note B.)

This wharf is mainly devoted to general merchandize and the trade in hides is comparatively small, only some eight men on an average being engaged, I am told, in that department. Other foreign hides were in store at the time of the above-mentioned attacks, but in each of those cases it was noticed that shortly before his seizure the sufferer had been employed, although not exclusively, in handling the Shanghai hides: the two labourers in moving them from one place to another, and the manager in opening the bales to show to intending purchasers.

All Messrs. Barrow's foreign hides are received at Butler's wharf, so that there would be nothing absolutely inconsistent with the supposition that East Indian and not the Chinese hides were the vehicles of infection in the London series of cases. The fact, however, that there was entire freedom from disease through all the long period when East Indian hides were alone being dealt with, and that mischief arose on different occasions, in the warehouse, in the process of removal, and in the tannery, just when the others were taken in hand, goes far to negative this supposition; and, as regards the attacks in France, the Chinese hides were the only ones sent by Messrs. Barrow to that country; so that if any connexion existed between the two series of attacks, which can scarcely be doubted, it can only have been through the Shanghai hides.

The export of hides from China is subject to "seasons;" the seasons alternating with and being in large measure determined by those of the tea trade. The 200 bales bought by Messrs. Barrow were the first of a particular brand, and from a particular exporter, to arrive in this country during the season of 1882. Later in the season there came to London from the same exporter 269 bales, but these were all again exported, to Italy, Sicily, Bavaria, and other parts of the Continent; the classification or sorting of the hides being effected in this country in the case of only 22 of the bales. The manipulation here, such as it was, does not seem to have resulted in any mischief, and of the bales sent abroad I have only as yet heard of 27 which went to Leghorn. The evidence in their case was again negative.

The condition of the first (Messrs. Barrow's) consignments would seem, however, to suggest that contemporaneous hides must be looked for amongst those of the previous season, and on doing this some further evidence of infection appears. In 1881, 335 bales, so far as I can ascertain, of the same brand of hides were imported; 50 of these were bought by Messrs. Barrow, and the remainder were again exported, all "in original," to various parts of the Continent. Whilst those received by Messrs. Barrow were being dealt with, in the workshop, and in the method, already described (East India "kips" being at the same time in hand), two men who had been engaged at the "soaks" were attacked by malignant pustule (Cases 13 and 14 in appended note); one in July and the other in September. The first (No. 13) had left Messrs. Barrow's employment on July the 2nd, and (meanwhile out of work) noticed the pimple on July the 6th.

It has seemed reasonable to particularize thus far one *brand* of hides: for it may be assumed that the goods of a particular exporter may be

drawn largely from certain districts, and, again, that one exporter may be less careful than another of the class of goods he receives. Looking, however, at other consignments from China, evidence is found suggestive that they also have been productive of some, although less extensive, mischief. Exclusive of the brand already spoken of, some 700 bales were imported during 1881, and some 1,300 during 1882. They were received by three different firms of brokers here, but with the exception of a few small parcels that found their way to Hull, Leeds, Glasgow, and perhaps one or two other provincial towns, were again exported to various places on the Continent. At one of the London warehouses where they were received (Messrs. Flack and Chandler's), where some 25 labourers on an average are employed (only about half of these however working on "raw" material), three men suffered from malignant pustule during the present year (1883); one being attacked on February 15th, one on February 22nd, and one on July 26th (Cases 15, 16, and 17 in Note B.). Hides from almost all parts of the world are received in this warehouse, but it was noticed by two of the sufferers that they had been from time to time for some few days before their seizure engaged in moving or showing to intending purchasers (unpacking and repacking bales) Chinese hides. The other of the three cases was a fatal one; the sufferer had stated at the hospital that he had been employed on Chinese and East Indian hides and Australian sheep skins.

At Messrs. Anning and Cobb's warehouses, where fewer labourers are employed, one of the men suffered in January of the present year from a fatal attack of what I think there can be little doubt was "internal" anthrax (Case 18, page 112). For three days prior to his seizure he had been re-packing the Chinese hides.

These hides would be of the 1882 season. Consignments were being landed at the "Gun and Shot" wharf in October 1882, for both the two last-mentioned firms. A wharf labourer employed partly in this work, and partly in landing sheepskins, was attacked on the 27th of the month (Case 19 in Note B).*

In view of this evidence, the trade in hides in China, and the occurrence of the anthrax disease amongst the native animals, have some special interest.

The hides are almost exclusively those of oxen, and are derived mainly from Mongolia and the district around Hankow. They are shipped in a partially dried condition, in local steamers and other craft, at Tinsin or Hankow for Shanghai; where, along with the comparatively small number of hides collected around that town, they undergo the process of curing (the application in some form or other of arsenic) which I have described. In this trade some hundreds of coolies are employed; they work in gangs under native managers, and the European employers are not, I am told, likely to hear of sickness or death amongst them unless something particularly striking occurs.

From the experience of those who have studied the subject of anthrax from the point of view of its geographical distribution, it is known that the disease affects sometimes the Chinese cattle, (Flemming in his work on Veterinary science speaks of having seen it in the north of China in

* Apropos of the trade with the Continent, in the course of my inquiry I heard of recent cases of "blood poisoning" amongst tanners at Massina and Genoa. The mischief was ascribed to arsenicated hides, but whether Chinese or not I cannot say. Somewhat earlier attacks were also heard of in Prussia.

A larger number of Chinese hides are exported to America than to this country; some also go direct to Germany, Italy, and France.

a particularly virulent form); and the presence in this country of Dr. Macleod, the deputy health officer for Shanghai, has enabled me to obtain some information as to the occurrence of disease amongst the cattle during the years when the hides that apparently caused mischief here were in all probability collected.

He tells me that he knows nothing of disease in the Hankow district or in Mongolia; but that in 1881 and 1882 there was an epizootic amongst both the native cattle and those imported from England and Australia around Shanghai. He saw some of the infected animals, and in one case made an inspection of the dead body, satisfying himself that the disease was not rinderpest, which had before been prevalent. The carcasses were on several occasions within his knowledge removed by men (Chinese) who took the skins as their remuneration.

Returning to the disease in this country, it may perhaps be in the memory of the Board that in the course of the "Woolsorter's" inquiry two outbreaks of anthrax amongst cattle, one at Harden and one at Buttershaw, were traced with great probability to the irrigation of the pastures with wool-washings. Evidence of a similar character is forthcoming in this inquiry likewise, and may be conveniently recorded at this stage of the report, while speaking of disease in animals, and since the Chinese hides come again under suspicion.

Most of the refuse from Messrs. Barrow's tannery, consisting of the sludge from the "soaks" and wash-pits, manure, spent lime, &c. is removed to a farm, belonging to the head of the firm, near Guildford. At the end of 1882 four young animals of a herd of some 25 cattle kept on the farm, and one of 12 horses, died of what was found to be anthrax; the attacks occurring at intervals of from a week to a fortnight of each other. Some time before the disease had appeared upon a neighbouring estate, but no communication between the two existed, and no source of infection in the case of Mr. Barrow's cattle could be discovered. It was noted, however, that the animals were being fed mainly with hay cut from a field which, in the previous March and April (the time it will be remembered when the Chinese hides were being dealt with), was manured with the refuse I have spoken of. They had, it appears, access to the field at the time when some at any rate of the refuse was put down, and again some months later when the hay was cut, and had suffered no injury; but, as to this, it is to be remembered that previous observations to a like effect have suggested a special danger from the use of infected hay, or of other rough and coarse fodder such as may be calculated to produce in the mouth slight punctures of the mucous membrane.

For the following abbreviated history of other outbreaks amongst cattle, I am indebted to the Messrs. Edgar, the able veterinary inspectors of the Dartford division; the facts, already investigated by them, they most kindly submitted a second time to critical examination for the purposes of this report.

On August 14th, 1882, one of 12 cows that for six weeks had been pastured on marsh land two miles below Dartford died suddenly; and inspection by the Messrs. Edgar, supplemented by the discovery of bacilli, and by positive results on experimental inoculation, proved the death to have been due to anthrax.

A ditch which bordered the marsh, separating it from another in a different occupation, and which provided drinking water to the cattle on either side, was found to receive the discharge from the soaks and wash-pits of a large tannery half a mile above, where hides from nearly all parts of the world, including the East Indies and China, were dealt

with. It was found also that in the preceding April two of a flock of 40 sheep, after two days occupation of the same marsh, had died suddenly; and that in the early part of the same year two heifers, pastured in the field on the opposite side of the ditch, were found dead.

The carcass of the cow first spoken of was buried six feet deep and covered with lime; the 11 remaining cows were removed for a period of 14 days, and the tan-yard drainage meanwhile diverted.

In the following November, when the 11 cows had been some nine weeks again on the field, one was found dead in the ditch (no signs of a struggle being present to justify the supposition of drowning); and on December the 12th another was found dead. The Messrs. Edgar, being this time appealed to, again showed that the disease was anthrax. They noticed at the same time that the ditch was still much polluted with tan-yard refuse, their directions as to cleansing having been neglected. These directions were then followed, and animals pastured again on the field after an interval of three months came to no harm. The farmer has, I understand, obtained compensation from the proprietors of the tannery.*

In January 1881, a heifer died on the home-farm belonging to the proprietor of the tannery; and Mr. W. Alston Edgar found at the post-mortem examination that the lesions were "most strongly "indicative of anthrax." Decomposition had, however, considerably advanced; and, experimental inoculation affording no results, a positive opinion was withheld. Subsequently two more deaths on this pasture occurred, the cause being referred to "pulmonary hyperæmia produced "by tympanitis from impaction of rumen." The animals were known to have had access to a corner of the field where several cartloads of refuse from the tannery were deposited.

In bringing the remaining cases of the disease amongst hide-workers that formed the subject of this inquiry under notice, I will reproduce a tabular statement contained in a paper published by Mr. Davies-Colley, surgeon to Guy's Hospital† (Table appended, note B). With the author's permission I have brought this table up to date, adding such cases as are known to have come under the notice of private practitioners, and, where possible, amplifying such details as tend to throw light on the source of infection.

In each of the 38 cases of malignant pustule recorded in the table, the lesion appeared on some part of the body habitually uncovered; the exact position being as follows :—

Neck (including inferior surface of chin), 16; cheek, 12; eyelid, 2; chin, 2; lip, 2; forehead, 1; forearm, 3.

In my report on the woolsorters' disease I brought forward evidence tending to show that the virus of anthrax did occasionally produce local effect upon the fingers and hands; although the resulting pustule did not in that position assume a typical appearance, and had not accordingly been generally recognised. (Vide Memorandum on the

* The Messrs. Edgar tell me that in their predecessor's time the fields nearer the tannery were periodically irrigated by tan-yard drainage; and that between the 7th of May and the 13th of July 1863, four cows of a herd pastured there died of what was pronounced at the time to be "blood-poisoning produced by the tan-yard washings." At the latter date the herd was removed to a distant pasture, and the fields are now converted into arable land.

† "Notes of two cases of malignant pustule, together with a table of 17 cases treated at Guy's Hospital, by J. N. C. Davies-Colley, M.D., Surgeon to, and Lecturer on Anatomy at Guy's Hospital." Vol. LXV. of the Medico-Chirurgical Transactions, London.

Clinical Features of the Woolsorters' Disease, Note C.) Some evidence is forthcoming that this also has been experienced amongst hide workers.

Dr. Francis Boney, who contributes an account of a fatal case of malignant pustule, writes: "A number of bad wounds (fingers and hands) "came under my care soon after this man's death, among the men engaged "in skin work at the wharves. In all the cases the first sign was itching "of a scratch, then a characteristic papule, then inflammation of absorbent "glands."

Mr. Charles Gibson, of Wetherby, near Leeds, writing of two cases of malignant pustule that he observed in that town amongst workers in a foreign-hide tannery, says: "The second case was of the hand; much less "severe in constitutional effects, but involving the formation of "secondary thecal abscess. The pustule was on the back of the hand, "and was much smaller and less painful than the one, in the other case, "on the neck."

The following case of "Acute phlegmon of finger, with gangrene of hand," treated in Guy's Hospital, may likewise be recorded in this connexion:—

E. D. (aged 43), admitted under Mr. Lucas' care to Guy's Hospital on November 6th, 1880. Patient works in a tan-yard, and has the first handling of hides, many of which are said to be "stale." States that men are apt to prick their fingers with hides, and that "gathered" fingers are very common. October 29th, 1880, pain in right forefinger, so as to be unable to work. Same evening finger swelled; patient came to hospital surgery. Came again on October 30th, and on 1st and 6th November. Meanwhile had been poulticing. On 6th November patient admitted; two sloughs on outer and palmar aspect of index finger, dorsum of hand red and tense. Under chloroform, three incisions were made in latter position. November 9th, a large wound on back of hand from sloughing of skin; one incision with sloughing edges, another with a slough at the bottom of the wound. A little swelling of the arm at outer side. No brawny swelling; no constitutional symptoms. 10th, tendon on dorsum of finger exposed. 13th, gangrene of dorsal and palmar aspects of lower two-thirds of index finger, except tip. Bone bare. Index extensor tendon on hand sloughing. 19th, all swelling gone from arm. Health good. 22nd and 23rd, slight attack of tonsilitis. December 3rd, index finger extensively sloughed and bone exposed. House surgeon instructed to amputate at metacarpal joint. Chloroform administered, but before patient completely under its influence, pulse suddenly stopped and he died.

It is not improbable, however, that certain of the minor cases of local festerings may be attributable to the action of the poisons used in the cure of the hides by absorption through slight abrasions of the skin. Other symptoms suggestive of the constitutional effects of arsenic, smarting of the eyes, dryness of the mouth and lining membrane of the nostrils, in one or two cases periodical attacks of colic, were heard of.

I am not at all sure that the list I have given of cases of anthrax even approaches completeness. Dock and wharf labourers are notoriously an unstable body of men. They are engaged day by day and paid by the hour; and should any individual be absent or disappear it is no one's business to inquire of his whereabouts. Their work is various, often being engaged upon many classes of goods besides hides, and the mortality statistics of the occupation are unavailable, since, in death registers, the general term "labourer" is too commonly employed. In considering whether medical testimony can be relied upon for completeness of information in this regard, the course of the disease in the most important class of cases, that of the "internal infection," is to be remembered. The course is such, so insidious in invasion, so sudden in termination, that it seems almost unlikely that sufferers would often be taken to hospital; and the nearest medical aid is often only sought at a

period too late for exact clinical observation. This was the experience at Bradford, even when public attention had been called to the occurrence of the disease; much more then is it likely to be the case in London where hitherto this form of the infection (without cutaneous lesion) has not been recognised. Drs. Goodhart and Mahomed, pathologists to Guy's Hospital, are of opinion that such cases have not in earlier years been entirely absent from the post-mortem table of the hospital. The following is the record of a case, for example, that is looked back upon with much suspicion :—

J. W. (aged 45), admitted to Guy's Hospital on June 5th, 1878, under the care of Dr. Goodhart. Patient works at the wharves, carrying sacks. History on admission :—First felt poorly last Sunday (three days ago), when he was taken with slight abdominal pain, lasting about a quarter of an hour. This recurred on Monday and Tuesday (yesterday). Yesterday evening was seized with intense pain, which continued until admission. Bowels open on Sunday and Monday. Yesterday took two pills; motion, small and very dark. Took last meal on Sunday; only milk since. Since last night there has been vomiting.

On admission at 2.45 p.m., patient collapsed. Face pale; lips blue; extremities cold and livid; pulse scarcely perceptible. Groaning with intense pain, and legs somewhat drawn up. Abdomen contracted and rigid; no excessive tenderness; mind quite clear; chest normal. Became more and more collapsed, with cold sweats. Died 7.45 p.m.

Autopsy. No general peritonitis (congestion in parts). Eight or nine ulcers in small intestine, small in size but larger towards cæcum. They presented a sloughy black surface, on removal of which the wall of the intestine was found to be thinned. Intense congestion around and upon the corresponding peritoneal surface. Similar ulcers in large intestine; one, in splenic flexure of colon, very large, and involving nearly the whole circumference of the gut. Peyers glands, healthy; spleen, soft; heart, lungs, kidneys, healthy.

In the practice of private medical men a few cases of suspicion have likewise occurred. I record below the history of a recent case in point. This, so far as one may now judge, would appear with extreme probability to afford an example of the internal form of the disease; and the manager of the hide warehouse where the man worked told me of a similar death (the history of which I could not, however, accurately ascertain) that occurred in the same employment three years before.

Case 18 in Table :—T. D. (Æt. 44). A sorter's labourer; very strong and healthy. On Friday morning, January 9th, 1883, felt a little poorly, with shivering, nausea, and pain in the back. Seemed all right on Saturday, and went to work as usual; went out also in the evening. Early on Sunday morning aroused his wife saying he felt very unwell, and as if he were "lock-jawed." Had a poultice on his neck, which seemed a little puffy, but there was no pimple or sore. That day had some difficulty in swallowing, but nevertheless took what there was for dinner. On Sunday night was constantly tossing to and fro in bed and got no sleep. Towards morning vomited repeatedly; extremities became cold and lips blue. At 10.30 a.m. the doctor first saw him. There was then oppression of breathing, cyanosis, and the muscles of the back were in a state of rigid contraction. At intervals through the day and the following night the patient seemed easier, but vomiting was frequent, oppression of breathing and great restlessness were frequently recurring, and the body was bathed in a profuse and fœtid perspiration. At 6 a.m. on Tuesday his wife, thinking he was dying, sent again for the doctor. The patient was gasping for breath, was blue in the face, and the extremities were cold. He again rallied, but died apparently asphyxiated at 10.30 a.m.

The ears, neck, and chest were found soon after death to be purple and swollen.

Attaching, however, what importance one may to these cases, it must be admitted that the London experience is very different to that of Bradford. There, during the 11 months taken for exact observation, the proportion of fully developed attacks of "internal" anthrax, or anthrax fever, to those of the external variety (although including amongst the latter two cases in which the malignant pustule seemed to follow general infection) was as 23 to 9; and in earlier years the preponderance of the former class appears to have been even greater.

It is very generally opined that the clinical varieties of this disease are determined by the accident of invasion—that in external or cutaneous and in intestinal anthrax, infection occurs by local inoculation of a "fixed" virus; in anthrax fever, by the invasion of the respiratory organs by volatile particles. It is interesting to see how far this explanation will account for the discrepancy between the London and Bradford experience.

The woolsorters' handling of the material which is for them the vehicle of infection is certainly the more *intimate*. They have, in the process of sorting wool and hair, to separate fibres that may on occasions be matted together by dried blood or discharges—a disturbance of possibly infective material obviously tending to aërial contamination, such as is not so necessarily caused by the manipulation, as I have described it, of hides. As a matter of fact, however, in the latter process, by the rubbing of the hides one against the other, &c., and by the roughness of the handling, much disturbance of surface impurities, as indicated by the amount of dust, goes on. In watching the work one cannot but consider that the explanation suggested is but a partial one, so far as the dry hides are concerned; in the case of "wet" hides, or when those cured in the dry way come to be "soaked" in the tanning processes, other agencies, of course, that may lead to a real fixity of the virus, operate.

As regards greater liability to aërial infection by reason of closeness of atmosphere, &c., I cannot say that the London warehouses have in this respect any superiority over those in Yorkshire; in both cases the rooms are themselves large and well ventilated, but in both space is often too much taken up with stored material; and in respect of the danger of infection through the alimentary canal, the practice of taking meals in the warehouses, and with unwashed hands, seems to be as prevalent in one place as in the other.

The doubt as to whether variations in the type of the disease can be ascribed to the accident of invasion is somewhat heightened when it appears that differences are not limited to the phenomena of the early stages. The "woolsorter's" disease, excluding from consideration certain apparently rudimentary attacks, was shown to be a very fatal malady; a condition of general infection being, moreover, the usual, apparently all-sufficient, cause of death. The experience of "external" anthrax at Guy's Hospital has been so different that, regarded as a constitutional infection, the disease, as it has been witnessed there, may almost be spoken of as benign. Thus, of 20 cases in which constitutional symptoms were present, death occurred in five only, and in three of these the result was apparently due to so purely a local condition as mechanical interference with respiration by the œdema resulting from the cutaneous pustule (Cases 7, 37, 38, of appended note B.). In the two remaining cases an extensive enteritis, with ulceration, had been established, and probably contributed materially to the fatal issue (Cases 16 and 34). The experience at the hospital in fact is such that, although constitutional symptoms be markedly present, the greatest faith is placed upon the extirpation of the local pustule; and in one remarkable case (Case 15) published fully at page 118, bacilli were found in the perspiration, saliva, urine, fæces, &c., the patient meanwhile exhibiting only occasional transient symptoms of illness.

These observations seem to imply either an inferior virulence of the virus itself, or a toleration of its presence such as we are not accustomed to witness in cases of "internal" anthrax. In support of the first possible explanation, the fact, now apparently well ascertained by pathological experiments and by studies of the naturally-acquired disease in animals, that the infective capacity of the anthrax bacillus is not uninfluenced by the medium in which it has developed in immediately preceding generations, might be advanced; and the second is recommended by the likelihood that some toleration on the part of the infected organism will be acquired during the slower inception of the virus in the external form. Or, again, there would be considerable show of reason in the argument that a local lesion is always developed at the point of inception of the virus, whether this be the skin or the bronchial or intestinal mucous membranes; and that since the bacillus cannot readily multiply in the circulating blood but must be continually reinforced from local foci of development, these latter, represented by the initial lesion, and varying in infective capacity according to their anatomical seat, constitute the governing principle of the disease.

The two last-named hypotheses afford, however, it will be seen, no explanation of the circumstance that tempted this discussion, the apparent immunity of the London workers from fatal attacks, relatively so common amongst the Yorkshire men, of "internal" anthrax.

It may be remembered that in the "Woolsorter's" report I brought forward considerable evidence, derived not alone from Yorkshire experience, to the effect that certain alimentary substances exerted an inimical influence in determining the course and severity of the constitutional infection; and that to this influence, if admitted, the woolsorters, from peculiar customs of theirs, had been specially subject.

III.—Remedial Measures.

The possible precautionary measures that may be taken to guard against the danger of anthrax infection from hides and skins, may perhaps be thus stated:

1. The establishment of an organization by which this country may be warned of the existence of the disease amongst the cattle, &c., of foreign lands; so that importation of hides and skins therefrom, or of "dead" hides and skins only, since danger must mainly rest with that class, may be prohibited, either absolutely or under certain restrictions as to previous disinfection, &c.
2. The general adoption of some process of *cure* which would serve not only to protect the skin from the ravages of the "worm," but would lead to the destruction also of morbific germs.
3. Failing this, a classification at the place of export (where classifications are already made for trade purposes), by which "dead" hides, &c. would be kept apart, to be dealt with afterwards under strict precautions.
4. Certain prophylactic or palliative measures, applicable to individual workshops, and individual workers, to be hereafter referred to.

As to the first of these suggestions, occasional Consular reports, and the reports of the Veterinary Department of the Privy Council (both, however, dealing mainly with those countries from which live cattle are exported) already afford some information of the kind needed, although not hitherto used for the purpose named. By other countries, I am told, Holland and America for example, an endeavour has been made in the direction indicated by requiring declaration before their consuls, by exporters, to the effect that the animals of the country whence the hides in question are derived are free from epizootic disease. The spirit of this regulation, however, is, it is believed, easily evaded; and it is pointed out that when hides are derived from remote parts the exporters must often be entirely ignorant of the condition of the native

cattle. The information needed for the carrying out of the first of the above suggestions would often, no doubt, be at fault, whatever were the arrangements made; for anthrax amongst cattle exists not only as an occasional widespread epizootic (in which case the country most concerned usually endeavours to provide against the dealing in infected material) but also as an enzootic; causing almost annually a certain mortality, but a mortality too moderate to attract more than local attention.

The second suggestion would be promising were it not for the extraordinary power apparently possessed by the spores of the bacillus anthracis to resist chemical agents. It might, however, be possible so to treat the skins by a preliminary process as to cause any attached spores to germinate into the easily destructible rods. However this may be, the attempt to provide what would at the same time be a method of preservation and of disinfection seems well worthy of being made; and is the more likely to be successful since the present processes of preservation are not regarded by merchants as at all satisfactory, and any change offering fair prospect of success would accordingly be welcomed.

The *classification* of the material, so that "dead" hides and skins should be kept apart, might probably as a general rule be brought about were buyers to insist upon it. It would result in the limitation of dangerous material mainly to one class of goods, instead of its distribution throughout the entire bulk.

The above suggestions refer, it will be seen, to the measures that it would be possible to take before importation of the goods, and of these the second is the only one that, under the most favourable circumstances, could be expected to afford any complete measure of protection. As to precautions applicable in this country, it must be observed that already, in the exigencies of the trade, the handling of the great bulk of the material is reduced almost to a minimum. The greater part of the dry foreign hides (the source apparently of greatest danger) are now simply removed to the tannery and then soaked in water, before being subjected to those processes which may be expected to result in their disinfection. To diminish danger from handling in such case it could perhaps only be suggested that the bales, instead of being first opened, should be steeped bodily in the water, the bands being cut after immersion; and that on special occasions to the water of the "soaks" might be added some "disinfectant," or some agent that would render the fluid an unsuitable medium, at any rate, for the cultivation of bacilli.

In Italy a system of *inspection* of the hides has been attempted, with the idea that the disease may be detected by the appearance of the skin. In animals, however, cutaneous localizations are exceptional; and even when present it is to be doubted whether by their mere appearance they could be distinguished from similar conditions arising from other causes. The system, moreover, necessitates considerable handling of the hides, and has, I believe, been abandoned.

The process of "sorting" should not be undertaken when any special reason for anticipating danger exists; and in any case should be so carried out as to avoid the unnecessary disturbance of matter in the form of dust attaching to the hides or skins.

The sorting-room should as far as possible be used exclusively as such. It should be well ventilated, and well lighted; the walls, &c., frequently limewashed; and dust, pieces of damaged hides, &c., carefully removed after each day's work. The same scrupulous cleanliness should be observed in the warehouse-rooms, and in tannery workshops. Those of the latter in which hides are first dealt with should be especially well cared for, and abundantly ventilated and lighted. Experience seems

to show that ordinary sanitary precautions of this kind go far to secure immunity from the danger in question.

I would, however, place in the very first rank of defensive measures, the dissemination of a knowledge of the danger amongst workmen, and of the precautions that are necessary to be observed in the first symptoms of attack. Experience continues to show that the disease is amenable to early and proper treatment; to favour the hope that the Greek sorters in their belief (referred to in my "Woolsorters'" report) that, under such favourable conditions, "no man need die of 'dallack,'" may not be mistaken.

One of the largest firms of hide brokers in London (Messrs. Dyster, Nalder & Co.) have already taken measures to forward the last-named object by issuing for the information of their employés a description in simple language of the disease, with plain instructions, in which I fully concur, as to the precautionary measures to be observed. (These instructions are reproduced in the appended note D.)

Before concluding this report, I would wish to express my great obligation to the many gentlemen who have assisted me in the inquiry. The merchants and manufacturers, many of whom are mentioned in the report by name, have, with a single exception, unreservedly placed their information at my disposal, and opened their manufactories and warehouses to my inspection. To the staff of Guy's Hospital, also, to Mr. Lockhart Stephens, the late house surgeon, and to many of the medical practitioners of the Bermondsey district, I am especially indebted for valuable assistance.

September, 1883.

NOTE A.

The Foreign Hide and Skin Trade.

Imports into the United Kingdom, 1882.

Hides: Raw, Dry:—

	Numbers (approximate).
From the East Indies (ox and cow)	4,050,000
,, do. (buffalo)	194,720
,, China (ox and cow)	142,100
,, Java	52,307
,, Madagascar	42,930
,, British Possessions in South Africa	296,649
,, East Coast of Africa (Native)	53,605
* ,, United States of America	110,188
* ,, Brazil	56,561
* ,, Argentine Republic	16,650
,, Straits Settlements	539,655
,, Aden	45,400
,, Russia	41,400
,, Denmark	2,280
,, Germany	125,062
,, Holland	125,697
,, Belgium	38,049
,, France	71,512
,, Egypt	38,400
Other countries	247,620

Totals:—Cwts., 576,196; Nos., 6,290,385; value, 2,098,895*l.*

* Those marked with an asterisk are mainly imported into Liverpool or Bristol; the remainder mainly into London.

HIDES: RAW, WET:—

	Numbers (approximate).
From Australia	162,734
,, British Possessions in South Africa	53,732
* ,, United States of America	9,236
* ,, Central America	11,866
* ,, Brazil	143,834
,, Uruguay	224,676
,, Argentine Republic	82,304
,, Sweden	14,844
,, Denmark	16,484
,, Germany	394,477
,, Holland	245,325
,, Belgium	541,402
,, France	124,938
,, Portugal	36,090
,, Other countries	74,516

Totals:—Cwts., 614,471; Nos., 2,136,498; value, 1,645,786*l.*

SKINS: UNDRESSED, SHEEP:—

	Numbers (approximate).
From South Africa	2,242,713
,, Australasia	1,689,388
,, Argentine Republic	1,139,555
,, France	1,088,235
,, Turkey	491,085
,, Aden	318,585
,, East Indies	225,291
,, Uruguay	158,460
,, Germany	140,642
,, Belgium	109,075
,, Spain	99,275
,, Italy	98,830
,, Denmark	74,592
,, Brazil	72,993
,, Other countries	216,999

Totals:—8,165,718; value, 1,080,671*l.*

GOAT:—

	Numbers (approximate).
From British India, Bengal	1,187,853
,, Madras	425,527
,, Bombay and Scinde	28,603
,, South Africa	1,142,930
,, Aden	217,074
,, Turkey	120,553
,, Holland	74,165
,, France	63,481
,, Other countries	360,165

Totals:—3,620,868; value, 358,775*l.*

The number of rabbit-skins, kangaroo and other skins imported, amounts to over 20,000,000 annually. These come mainly from Australasia, and are discharged at the London Docks.

* Those marked with an asterisk are mainly imported into Liverpool or Bristol; the remainder mainly into London.

The following table affords some indication of the extent to which the different ports of the United Kingdom share in this trade:—

Import of Raw Hides and Skins at Principal Ports (1882).

Ports.	Total United Kingdom.	London.	Liverpool.	Bristol.	Hull.	Southampton.	Grimsby.	Goole.	Harwich.	Newhaven.	Newcastle.	Other principal English ports.	Glasgow.	Leith.	Other principal Scotch Ports.	Dublin, Cork, and Belfast.	Other Irish Ports.
Raw Hides (cwts.)	1,190,667	666,763	203,208	78,869	77,805	39,855	5,434	3,433	3,556	2,907	1,950	1,686	7,175	4,597	2,249	3,415	—
Sheep Skins (numbers).	8,165,718	5,260,292	1,339,423	3,346	84,104	1,240,925	9,748	220	3,400	69,227	4,315	27,368	22,202	37,398	—	—	—

Goat skins (3,620,868) are principally imported into London.

In estimating the extent of the manipulation of foreign hides and skins in this country, a very large reduction must, however, be made from many of the above quantities; for much of the raw material is again exported to the Continent and America. Thus, during 1882, foreign hides were exported to the amount of 423,594 cwt.; sheep skins to the number of 801,389; and goat skins, 3,430,960.

NOTE B.

Histories of certain cases of Anthrax; Clinical Notes; and Notes on Autopsies.

[In the subjoined text a fuller record of a few of the more important cases included in the Table (page 122) is supplied.]

Case 7.—M. S., æt. 22, a tanner; admitted to Guy's Hospital under the care of Mr. Bryant on April 20th, 1882. Two days since (18th) found a pimple, that had for some time previously existed on neck, somewhat painful and slightly swelling. Now a pustule of typical appearance presented. 2 p.m., temp., 101°·6 F.; pustule excised. Midnight, swelling increased and extending over thorax.

21st. Patient distressed on account of difficulty of breathing; head and neck greatly swollen, so that he has to lie with head thrown back over a pillow. Temp. (noon) 101°·8. Incisions below angle of jaw to relieve breathing. Microscopical examination of serum and of blood gave negative results.

22nd. Temp. 100°·2. "No delirium, no sign of general sepsis. Death, apparently due to pressure upon air tube, at 2 p.m." P.M. examination refused.

Case 15.—A.B. (æt. 43), a sorter's labourer; admitted to Guy's Hospital on morning of February 20th, 1883, under the care of Mr. Davies-Colley. On Thursday evening February 15th, had noticed a small cherry-red "boil," about the size of a pea, on the seat of a scratch, near the mouth, he had received earlier in the day. Same evening, rigor; loss of appetite from that time; no rest; delirium at night. Redness, accompanied by puffiness, gradually increasing. Cough since Sunday, the 18th.

On admission: Patient, a well nourished muscular man; extremely weak; cannot stand. Near corner of mouth, a bright scarlet swelling, having a translucent appearance, with a depressed black centre. The swelling, which measures $1\frac{1}{8}$ by nearly 1 inch, rises abruptly from the surrounding skin of

the cheek, the latter being puffy but not perceptibly reddened. There are no distinct vesicles around eschar, but an herpetic eruption about the lower lip. The patient describes a gnawing sensation, not amounting to pain, in the pustule.

Temp. 99°·3. Pulse 80.

Pustule excised under chloroform; and the wound cauterized with Vacquelin's thermo-cautery.

Diet: brandy, beef tea, milk.

Serum obtained from vesicles showed abundant typical bacilli; "blood, only micrococci."

7.30 p.m., Patient feels better; t. 101°·1; 1 1.30 p.m., t. 98°·4.

21st. Fair night, t. (11.30 a.m.) 99·30°. Pulse, 72. Swelling of face subsided; complains of abdominal and lumbar pain.

22nd. Had a very restless night, and was slightly delirious; now, frontal headache and pain between shoulders. Has bad cough (little bronchitis) and breath smells very foul. Sputum contains bacilli and micrococci.

23rd. Wound red at edges. Urine examined microscopically showed presence of bacilli and micrococci. (Chicken added to above diet.)

26th. Wound dressed daily since last report; complains of slight frontal headache still. Had a good night. Slightly delirious at times. Temp., 97°. Pulse, 64. Cough better. Appetite good. Still some puffiness about angle of jaw.

27th. Fæces examined showed presence of bacilli and micrococci. Bacilli also found in the perspiration. (Ordinary diet ordered.)

March 1st. Slight frontal headache and cough. Temp., 96°; pulse, 66. Wound dressed daily.

2nd. Blood examined, no bacilli detected.

3rd. No cough; frontal headache continues. Temp., 97°·8; pulse, 57. To get up after tea.

6th. Patient feels better, t. 98°; pulse 75. (Full diet.)

10th. Pains between shoulders, not affected by respiration. Has had a feeling of faintness come over him, but has not lost consciousness. Perspires at times rather freely. Temp, 97°; pulse, 72. (Brandy, eggs.)

12th. Last night patient had an attack of diarrhœa. Ten motions, last containing a little blood and mucus. Eaten nothing but the ordinary full diet. Temp. (morning), 98°; pulse, 92. Fæces examined; no bacilli.

13th. Ordered to keep in bed, and put on light nutritious diet; milk, beef tea, eggs, farinaceous food; brandy. Fæces and sputum contain numberless bacilli.

14th. Fish diet.

16th. No diarrhœa since 13th. Wound nearly healed. Sputum examined, contains a few bacilli. Seems pretty well; ordered to get up.

17th. Full diet.

20th. Discharged. Urine examined and found to contain a few bacilli. Patient came twice to the hospital during next fortnight, complaining of ill-defined pains, muscular twitchings, cough, and debility.

Case 16.—W.S., æt. 33, sorter's labourer, admitted to Guy's Hospital under the care of Mr. Bryant, on Monday 26th February. On Thursday the 22nd, noticed pimple on left cheek. This, on Friday morning, was the size of a pea, and increased during day, swelling appearing under jaw. Began to feel unwell between 4 and 5 p.m. on Friday; appetite then impaired. This morning (26th) his hands got cold and dead, and he has suffered from retching and shivering.

On admission, at 11 a.m., on left cheek a raised sore: a central blackish slough, surrounded by a yellowish brown rim one-third of an inch broad, on which are the remains of vesicles now broken and exuding serum; surrounding swelling red, and with a translucent appearance. Glands under jaw much swollen; œdema extending round the neck as far as the spine, and in front as low as the clavicle.

Face, ears, and lips livid; hands slightly livid; complains of coldness of extremities; sensation in hands impaired; sweating profusely. Pulse, 132, weak; temp., 100°·2. Could not stand this morning.

Pustule excised at 3 p.m. by circular incision one-fourth of an inch outside vesicular ring; wound cauterized with benzine cautery.

The administration of chloroform had been commenced, but patient struggled so violently, and became so extremely livid, that it was discontinued after about 30 seconds. Patient said the operation gave no pain.

Characteristic bacilli found in large numbers in serum from the sore and blood of wound; they were very numerous also in sputum, but none detected in blood drawn from finger.

Feeling of light-headedness and bad dreams; breathing oppressed. Taking iced milk and brandy.

Vomited several times; expiration "blowing" or "puffing," as though lips were paralysed. Died at 12 (midnight), having a sort of convulsion of the lower extremities.

Autopsy (by Dr. Mahomed) 12½ hours after death.—No signs of decomposition; rigor mortis well marked; much hypostasis, and body generally cyanosed. Wound of excision appeared healthy. *Head:* a few small patches of blood staining of pia-mater, especially over side of right hemisphere.

Respiratory organs.—Cervical glands vascular and somewhat swollen. No recent pleurisy. Lungs apparently healthy, but dotted here and there are dark red nodules, like small infarcts (about 20 in all). Neither inflammation nor œdema in surrounding tissue. Mucous membrane of trachea congested; bronchial glands not enlarged. Heart normal; aorta slightly blood stained. The blood unusually fluid and of dark colour.

Abdomen.—"Patches of injection could be seen through the *peritoneum* covering the small intestine, at the spots corresponding to the anthracoid nodules to be described. No lymph on peritoneal surface; but the peritoneum contains about two pints of dark yellow-red fluid. Mucous membrane of *stomach* thick and mammilated, with much adherent mucus. On the anterior wall, about middle of lesser curvature, is an oval patch, $\frac{3}{4} \times \frac{3}{8}$ in., in the centre of which is a small dark slough, appearing to have already partly separated and the remainder being rapidly thrown off, leaving the muscular wall of the stomach exposed. Close by, a little nearer the pyloric orifice, is another small ulcer, about $\frac{3}{8}$ in. by $\frac{3}{8}$, from which the slough has entirely separated. These appear to be small anthrax nodules in course of natural cure. Passing down from the pyloric orifice the following condition was found pretty equally distributed throughout the small intestine:—In the *duodenum* and *jejunum* were numerous anthrax growths; in this part of the intestine they universally followed the line of the valvulæ conniventes; a portion of such a valve, varying in length from ¼ to 1½ inches, would appear with a black or rather dark-brown slough occupying the free edge of both surfaces, much like the brownish slough which occurs in the skin. Surrounding this would be an area of hyperæmia, with some swelling of the mucous membrane, varying in size according to the slough, but with a radius of not more than an inch in the largest."

"Lower down, where the valvulæ conniventes disappear or become less marked, the anthrax nodules became merely circular patches of raised blackish-brown slough with surrounding area of vascularity. In the lower part of the ileum the solitary glands were remarkably large and prominent, but there was no increased vascularity about them nor any slough in their centres."

"The cæcum was remarkably œdematous; its walls $\frac{3}{8}$ to ½ inch thick, with pure œdema, no redness. It contained several anthrax nodules in its cavity, and around these were the usual vascular zones. They were also scattered through the upper part of the large intestine."

Mesenteric glands, not notably enlarged, but on section are seen to be vascular and of a purple colour. Some of them appear to contain small ecchymoses.

Spleen not much enlarged; but soft and diffluent.

Other abdominal viscera apparently healthy.

Case 34.—I. O. (aged 47) a tanner, admitted on September 4th, 1877, to Guy's Hospital, under the care of Mr. Howse. On August 21st, noticed a small pimple on cheek; on August 30th, cheek swollen. Patient thinks he has been poisoned in the tannery, and says it is not infrequent for men to be thus affected. On admission: chilliness; slight dyspnœa.

Temp. 103° F.; pulse 101, rather weak. Vomiting on two previous days frequent. Patient complains of indistinctness of vision, of a burning sensation in legs, and of sleeplessness. Pustule excised and wound cauterized with a mixture of chloride of zinc and starch. *Sept.* 5. Weak and faint, had a little sleep, temp. 100°·4. *Sept.* 6. Feels better, œdema of cheek nearly disappeared. Bowels freely opened. Sharp pain in right side of neck. *Sept.* 7. Feels much better; takes his food well, does not have good nights. 10.30 p.m., vomiting, occasional cramps in limbs, and shivering. Sore over loins. Tem. 97°·9. *Sept.* 8, 1 a.m. Extremities cold, sweating. 10 a.m., pulse very weak; still pain over loins. Temp. 98°·0 F. Later, delirium. Death, 5 p.m.

Post-mortem examination, 45 hours after death: body cyanotic, especially the face, thighs, and scrotum; very fœtid smell. Tissues below wound of excision somewhat indurated, and one gland beneath jaw swollen and intensely congested. Otherwise no evidence of extension of the disease: veins and cellular tissue quite healthy. *Abdomen*: No general peritonitis, but over surface of small lengths of ileum were patches of very intense ecchymosis; here intestine remarkably thick and hard at its mesenteric attachment, but, with one exception, the corresponding mesenteric glands were not enlarged. The alimentary canal being laid open, in the stomach were found two or three raised flattened ridges of mucous membrane; firm to touch, and fleshy looking on section; their surface covered by a film of black discoloured blood. About the middle of ileum, at points corresponding with the ecchymoses on the peritoneal surface, were two large patches, about 3 inches in length, and separated by about 18 inches of healthy intestine, and beneath these again two smaller ones, where the mucous membrane was in a state of almost carbuncular inflammation. (To quote further Dr. Goodhart's notes: "There was no pus anywhere, though "it could not be doubted that the brawny swelling was inflammatory; "indeed I think that the term 'charbon of intestine' not a bad one; the "induration was very similar to that of the cheek.") The area of Peyers patches appeared least affected, and the solitary glands were not enlarged.

Lungs collapsed; spleen, pulpy; other organs, normal.

Notes on Autopsies (for clinical notes, see the table).

Case 37.—*E. M.* (aged 43). The starting-point of the disease was still marked as a purple patch, the size of a penny-piece, about one inch below the angle of jaw. The tissues beneath and for some distance around, including neck and upper part of chest, were infiltrated with inflammatory products. Nowhere was there any tendency to suppuration. The facial and jugular veins were healthy. The œdema extended probably along the planes of the cervical fascia, so as to reach the base of the tongue, the tonsular and faucical regions, all of which were extremely œdematous. The entrance of the larynx also immensely swollen, and the tissue in the ventricle of the larynx was likewise œdematous, bulging above the vocal cords. Lungs healthy.

Case 38.—*M. A. C.* (aged 11). Post-mortem, 26 hours after death. No sign of decomposition; much hypostasis. *External examination:* Several incisions near anterior part of neck, and below angle of jaw a vesicular swelling a line or two in diameter, with some raised thickening of its base. The skin and subcutaneous tissues around an inch and more in thickness from œdema. No suppuration anywhere. Cervical glands slightly enlarged. Pleuræ normal. Lungs normal, except that they contained an excess of dark blood. *Larynx:* Aryteno-epiglotidean folds considerably œdematous, not sufficiently so now as to close the rima, but flaccid and easily falling over the chink, and this had probably happened as the cause of death. *Intestine:* About 1½ inch above the cæcum a patch of intestine was covered by a flaky white membrane which rested on the surface of the mucous coat, but was not adherent to it. Neither was the mucous coat injected beneath it. Intestine elsewhere healthy. The *Vagina* at its upper part contained some pus-like fluid, and in scraping this away a velvety injected surface presented, which, on scraping, gave place again to smooth mucous membrane. The rugæ elsewhere injected, but not covered by any inflammatory product.

NOTE B.—*continued.*

A TABLE of 37 CASES of ANTHRAX that have occurred in RECENT YEARS amongst Cases observed amongst the

[NOTE.—Cases marked with an Asterisk were treated at Guy's Hospital; these, with the exception contained in Vol. LXV. of the Medico-Chirurgical

No.	Physician or Surgeon.	Patient.	Sex.	Age.	Date of Attack.	No. of Days before applying for Medical Treatment.	Seat of Charbon.	Condition of adjacent Parts.
1	Mr. Dry	J. D.	M.	23	Feby. 10, 1882	5	Upper lip (typical lesion described).	Much swollen
2	Mr. James	G. N.	M.	24	Feby. 11, 1882	10	Chin (typical lesion described).	Neck much swollen
3	?	W.	M.	18	Feby. 20 (about), 1882.	?	Forehead	Swollen
4	Mr. Adcock	R. C.	M.	21	March 3, 1882	4	Neck	Great swelling, extending down to breast.
5	Mr. Marshall	S.	M.	52	March 4 (about), 1882.	9 (about)	Do.	Swollen and dark
6	?	C. B.	M.	50	April 6, 1882	2	Under chin	Glands on each side swollen.
*7	Mr. Bryant	M. S.	M.	22	April 17, 1882	3	Neck	Extensive œdema
8	London Hospital (out-patient).	F. D.	M.	18	Feby. 1882	—	Under chin	Swollen down to chest
*9	Mr. Golding-Bird.	G. P.	M.	50	Feby. 1, 1882	1	Lower eyelid	Slight œdema
*10	Mr. Howse	J. J.	M.	29	July 25, 1882	1	Neck	Diffused redness and œdema.

- - - - - NOTE B.—*continued.*

PERSONS ENGAGED in the LONDON HIDE and SKIN TRADE; to which are added two GENERAL POPULATION.

of two or three of the more recent, have before been recorded by Mr. Davies-Colley in a similar Table Society's Transactions.]

Constitutional Symptoms.	Where employed.	Occupation.	Apparent Source of Infection.	Treatment.	Result.	Remarks.
Headache only -	Messrs. Barrow's.	Tan yard labourer.	? Chinese hides (see text of report).	Poulticing -	Cured -	Confined to house two days, off work 17. Walked to surgery.
Headache and vomiting.	Do.	Do.	Do. -	Do. -	Do. -	In bed one week; then got up and walked to doctor's surgery. Off work a month.
None - -	Do.	Do.	Do. -	Do. -	Do. -	Patient went into the country. Manager of works describes typical pustule.
Extreme restlessness, cold sweats, difficulty of breathing; cyanosis. No delirium.	Do.	Tan yard labourer and flesher.	Do. -	Do. -	Died (March 7).	Noticed pimple on Friday; restlessness, &c. first on Saturday night. Died Tuesday. Total abstainer. No p.m.
Pain and tightness in chest; vomiting, restlessness, slight delirium.	Do.	Tan yard labourer.	Do. -	Do. -	Died (March 17).	Constitutional symptoms (vomiting, pain) on Sunday 6.30 a.m. Died following Friday. Rapid decomposition. No p.m.
Headache only -	Do.	Do.	Do. -	Do. -	Cured -	In bed two days; off work five weeks.
Dyspnœa. T. 101°·6 F.	Do.	Tanner -	Do. -	Excision (without cauterization)	Swelling increased after operation. Death in 48 hours.	Fuller record in text (p. 118).
None - -	Messrs. Woods.	Carter -	Do. -	Cauterization	Cured -	Off work a week.
February 3rd. E. T. 102° F.	Messrs. Barrow's.	Tan yard labourer.	Do. -	Excision and cauterization	Cured -	Considerable inflammation and sloughing, which resulted in ectropion, followed operation.
(On admission) depressed, restless, faint, profuse sweats. T. 102°·4.	Butler's wharf.	Labourer.	Do. -	Do. (caustic potash)	Cured -	During convalescence pain in legs, with bluish-red patches; slight diarrhœa.

No.	Physician or Surgeon.	Patient.	Sex.	Age.	Date of Attack.	No. of Days before applying for Medical Treatment.	Seat of Charbon.	Condition of adjacent Parts.
*11	Mr. Durham	T. E.	M.	28	Aug. 8, 1882	8	Cheek	Face, neck, and cervical glands swollen.
12	Dr. Douglas	J. W.	M.	30	December 10 (about), 1882.	6	Neck	Swollen
*13	Mr. Davies-Colley.	T. W.	M.	39	July 5, 1881	6	Cheek	Œdema to third rib
14	Mr. Marshall	R. N.	M.	18	Sept. 4 (about), 1881.	8	Under chin	Much swollen
*15	Mr. Davies-Colley.	A. B.	M.	43	Feby. 15, 1883	5	Cheek	Puffy swelling; enlarged glands.
*16	Mr. Bryant	W. S.	M.	33	Feby. 22, 1883	4	Do.	Glands beneath jaw much enlarged; œdema down to clavicle.
*17	Mr. Howse	E. W.	M.	37	July 23, 1883	4	Do.	Swollen, red, and tense. Few enlarged submaxillary glands.
18	Dr. Gittins	D. T.	M.	44	Jan. 9, 1883	3	? Internal anthrax.	
*19	Mr. Lucas	D. C.	M.	18	Oct. 27, 1882	3	Neck	On admission, side of face and neck down to shoulders much swollen.
*20	Mr. Howse	G. B.	M.	31	Dec. 10, 1882	3	Do.	Swelling (not extending below level of thyroid cartilage). Few small glands, rather hard.

Constitutional Symptoms.	Where employed.	Occupation.	Apparent Source of Infection.	Treatment.	Result.	Remarks.
(Before admission) headache, shivering.	Butler's wharf.	Labourer -	? Chinese hides (see text of report).	Excision -	Cured -	The pustule developed at seat of old wound that had healed about six weeks before.
Headache, shivering.	Do.	Foreman -	Do. -	Poultices -	Do. -	Came to warehouse every day, but felt very ill. (Typical pustule described.)
Headache, loss of appetite. T. 101°. F.	Messrs. Barrow.	Tan yard labourer.	Do. -	Excision: and application of chloride of zinc.	Cured - (Rapid disappearance of local and constitutional symptoms after operation.)	Full account in Mr. Davies-Colley's paper. Bacilli not found in blood; found in the layers of the corium beneath eschar.
Headache, vomiting, restlessness; slight delirium.	Do.	Do.	Do. -	Poulticing -	Cured -	In bed three days, and only went to doctor on getting up. Off work eleven days; very weak for some time.
On admission, extremely weak; has had rigor; delirious at night; cough.	Do.	Do.	Do. -	Excision and cauterization.	Do. -	Bacilli found in all the excretions. Fuller account in text (page 118).
Shivering, itching, coldness and lividity of extremities. T. 100°·2. Sweating.	Messrs. Flack and Chandlers.	Sorter's labourer.	Do. -	Excision and cautery.	Died Feby. 26 (9 hours after operation).	Secondary affection of intestine, stomach, and lungs. Fuller account in text (page 119).
None - -	Do.	Do.	Do. -	Do. -	Cured -	Typical bacilli found in serum escaping from vesicles around eschar.
Profuse and fœtid perspirations, great restlessness, vomiting, dyspnœa, cyanosis; tetanic spasms.	Messrs. Anning and Cobb.	Do.	Do. -	- - -	Died Jany. 13.	Swelling of neck and chest, with much blue discolouration immediately after death. Fuller account, see text, page 112.
On admission, T. 102°·2. Oct. 31, drowsy, somewhat incoherent. T. 104°·6. Nov. 1, restless, more coherent. T. normal.	Gun and Shot Wharf.	Labourer -	Do. -	Excision and cauterization.	Cured -	Continued improvement after Nov. 1.
Shivering; headache. T. 101°·8.	A Thames wharf.	Do.	(Carrying dry hides.)	Excision; caustic potash.	Do. -	Continued improvement after operation. (I could not trace this man.—J. S.)

No.	Physician or Surgeon.	Patient.	Sex.	Age.	Date of Attack.	No. of Days before applying for Medical Treatment.	Seat of Charbon.	Condition of adjacent Parts.
*21	Mr. Lucas -	B. M.	F.	14	May 1883 - -	6	Upper lip -	Swollen and brawny. Glands enlarged.
*22	Mr. Golding-Bird.	J. R.	M.	27	Sept. 16, 1881 -	3	Cheek - -	Swollen - - -
*23	Mr. Jacobson	C. T.	M.	30	Aug. 25, 1881 -	2	Do. - -	- - - -
*24	Do. -	F. F.	M.	47	June 29, 1881 -	4	Back of fore-arm.	- - - -
*25	Do. - -	F. R.	M.	31	April 9, 1881 -	7	Lower eyelid -	Upper eyelid and cheek swollen, also glands.
26	Mr. Francis Bonney.	J. W.	F.	67	March 10, 1881 (said he had been stung by a fly about 10 a.m.).	1	Neck - -	On 12th, dense swelling over throat, and entire surface of cheek; 5 inches deep over sternum on evening of 12th.
*27	Mr. Lucas -	S. C.	F.	47	Dec. 25, 1881 -	11	Cheek - -	Eye closed; glands under jaw enlarged.
*28	Do. - -	D. W.	M.	23	Oct. 5, 1880 -	5	Do. - -	Much swelling. Eye closed; lip an inch thick; glands enlarged.
*29	Mr. Bryant -	J. R.	M.	28	Nov. 24, 1879 -	5	Forearm -	Blush, up to axilla -
*30	Mr. Golding-Bird.	J. E.	M.	23	Nov. 9, 1878 -	4	Cheek -	Swollen; glands enlarged.
*31	Mr. Howse -	F. H.	M.	18	Nov. 1, 1878 -	3	Chin - -	Much brawny infiltration.

Constitutional Symptoms.	Where employed.	Occupation.	Apparent Source of Infection.	Treatment.	Result.	Remarks.
None - -	- -	"Unhairer"	English and Australian rabbit skins.	Excision; cautery.	Cured -	The centre of the pustule was black, but no secondary ring of vesicles. Blood and serum examined without discovering organisms.
No appetite; sick; limbs feel stiff.	Sun and Topping Wharf.	Sorter's labourer.	Bombay and Calcutta hides, horns, and hoofs.	Excision; galvanic cautery.	Do. -	——
Loss of appetite and sleeplessness.	Do. - -	Do. -	Bombay and Zanzibar hides.	Excision; chloride of zinc.	Do. -	——
None - -	A Thames wharf.	Stevedore	Loading Australian fleeces on 22nd June, again on 29th (latter, day of attack).	Excision -	Do. -	——
Sleeplessness; trembling.	Sun and Topping Wharf.	Labourer -	Australian fleeces; hides in warehouse where works.	Excision; chloride of zinc.	Do. (Rapid improvement after operation.)	Bacilli found in blood taken from wound. Full account of this case in Mr. Davies-Colley's paper.
Had to leave work evening of 10th (sick and giddy); 12th, p. 130; resp. 30. T. 104°. "Felt "as if chest was "filling up;" coma.	A Thames wharf.	Do. -	Hides; chiefly wet Russian.	Constitutional.	Died second night of illness (12th).	Mr. Bonney describes the pustule itself as "a "hard carbuncular eminence. "having a red "pimple which "shone, but apparently had no "exudation."
Very little - -	Own home, Cubit Town	Household work.	Husband unloads ships, but had not been engaged on hides.	Excision; cautery.	Cured. (Rapid improvement after operation.)	Strict inquiry failed to show source of infection.
None on admission to hospital. Two days before had fainted twice, and had had a sleepless night.	Sun and Topping Wharf.	Labourer -	Sorting East India hides.	Do. - -	Cured -	The day he came to the hospital the swelling was subsiding.
None - -	- -	- -	Sheep and goat skins from Cape.	Excision; chloride of zinc.	Do. -	No bacilli found in blood or serum. (I did not trace this man.—J. S.)
Headache, shivering.	Tannery -	Labourer -	At "soaks" (first handling of hides).	Excision; carbolic and tannic acid.	Cured -	——
Looks quite healthy and strong.	Hide Wharf	Do. -	Foreign hides -	Excision; perchloride of iron and caustic potash applied.	Do. -	Nothing abnormal found in blood.

No.	Physician or Surgeon.	Patient.	Sex.	Age.	Date of Attack.	No. of Days before applying for Medical Treatment.	Seat of Charbon.	Condition of adjacent Parts.
*32	Mr. C. Foster	A. P.	M.	17	Jan. 12, 1878 -	6	Anterior surface of forearm.	Glands enlarged -
*33	Mr. Golding-Bird.	D. D.	M.	20	Oct. 14, 1877 -	3	Neck - -	Whole side of neck much swollen and brawny.
*34	Mr. Howse -	J. O.	M.	47	Aug. 20, 1877 -	15 after appearance of papule, 5 after swelling.	Cheek - -	Great swelling. Glands enlarged.
*35	Mr. Davies-Colley.	G. J.	M.	27	March 31, 1875 -	7	Do. - -	Some swelling of glands under jaw.
*36	Do. -	J. F.	M.	33	Dec. 14, 1873 -	6	Chin - -	No surrounding œdema.
*37	Do. - -	E. M.	M.	43	Nov. 15, 1873 -	7	Neck - -	Hard œdema of neck.
*38	Dr. Habershon.	M.A.C.	F.	11	Oct. 13, 1873	6	Under chin -	Œdema of face and neck, glands swollen.
39	Dr. Jackson (Dr. Marshall and Sir Jas. Paget in consultation.)	Mr. G.	M.	—	March 29, 1873 -	11	Do. - -	On 30th March, slight swelling; on 31st, tissues in front of neck enormously swollen, hard and brawny, and discoloured.

A few other cases that did not, for one reason or another,

Constitutional Symptoms.	Where employed.	Occupation.	Apparent Source of Infection.	Treatment.	Result.	Remarks.
Sick; faint; no rest; T. 101°·2.	Tannery -	Labourer (puts hides to soak.)	Foreign hides -	Excision -	Cured -	——
Temp. 103°; pulse 128. Day after operation, vomited, drowsy, restless, jerking movements of face and hands.	South-Eastern wharf.	Do. -	Five weeks ago unloaded dry hides; since then employed at same wharf, but chiefly in unloading potatoes and currants.	Do.; nitric acid.	Do. -	No bacilli found in blood. Patient for two days following admission continually expectorated "a clear, "thick, viscid "substance."
Vomiting; T. 103°, slight dyspnœa; great restlessness.	Sun and Topping Wharf.	Do. -	East Indian dry hides (Calcutta and Bombay).	Excision; (Sept. 4th), chloride of zinc.	Died, Sept. 8th.	Clinical and P.M. notes, page 120.
None - -	Wharf -	Do. -	Foreign hides -	Excision; chloride of zinc.	Cured -	——
None - -	Messrs. Anning and Cobb's warehouse.	Sorter's labourer.	East India hides -	Excision; chloride of zinc paste.	Do. -	For six years a total abstainer.
Dyspnœa, vomiting T. 100°·5.	Wharf -	Labourer -	Foreign hides -	Laryngotomy	Died, Nov. 24.	Two years total abstainer. P.M. notes, page 121.
Dyspnœa - -	- -	- - -	Not ascertained -	Incisions -	Died, Oct. 19.	P.M. notes, page 121.
On 30th March, feverishness; on 31st and following days, great and increasing difficulty of breathing and swallowing; profuse perspirations; fœtid breath, delirium, prostration.	- -	Hide merchant.	? The handling of raw hides, or the sting of an insect on the river banks where the patient had driven.	Incisions and stimulants.	Death, Apr. 4.	When first seen by Dr. Jackson the swelling presented what appeared to be a minute central puncture.

admit of satisfactory investigation, were heard of.

NOTE C.

[The subjoined Memorandum on the Clinical Characters of "Woolsorters' Disease" (Anthrax), was largely made use of during the present inquiry.]

THE "INTERNAL FORM" OF THE INFECTION, OR ANTHRAX FEVER.

Premonitory Symptoms (of variable duration).—Chilliness, aching or stiffness of limbs, and mental depression. Restlessness, sense of constriction of chest, and oppression of breathing. Headache, dizziness, nausea, or, less frequently, vomiting.

Stage of Full Development.—Notwithstanding the indefinite premonitory symptoms, the stage of full development is generally somewhat sudden and unexpected in its onset, so as to cause much alarm. The prostration and restlessness become extreme; there are precordial anxiety and dyspnœa; blueness of the face and extremities (cyanosis) is conspicuous; and the patient may die within 24 or 36 hours with all the appearances of collapse or of asphyxia. A fatal termination is, however, more often postponed until from two to five days after the commencement of this stage. Other nervous phenomena—muscular paralyses, convulsions, or tetanic spasms—are then apt to develop themselves; and evidences of various acute local congestions (especially of the lungs, less frequently of the gastro-intestinal tract) are rarely wanting. Delirium is often absent; and the temperature is irregular. Exacerbations, alternating with more or less complete remissions, of the more urgent symptoms, constitute usually a striking feature of the disease. Recovery is not so rare as has been supposed, even in fully developed attacks; but death may occur from a relapse, or from secondary septic processes. The body after death usually undergoes rapid decomposition, with blue discoloration and swelling, especially about the neck.

[Before the disease was identified amongst the woolsorters, deaths were usually referred to one of the more prominent symptoms of anthrax, and registered as from "pneumonia," "enteritis," "peritonitis," "meningitis," &c.]

THE "EXTERNAL FORM" OF THE INFECTION, OR MALIGNANT PUSTULE.

The malignant pustule attacks almost always parts of the body habitually uncovered, and most frequently the face. It commences as a small papule, which quickly develops into a vesicle, and this, being broken, pours out a little watery exudation. The base of the vesicle, and the surface immediately adjacent, dies; so that in about three days after its appearance the lesion consists of a small central black eschar, with a raised border of inflamed and tumid skin upon which vesicles are apt to be developed; a crop of secondary vesicles surrounding thus the central eschar like a wreath. The neighbouring lymphatics and glands are speedily implicated; and the patient may soon lapse into the condition described above of constitutional infection.

The pustule does not apparently always present this typical appearance; when occurring upon the hands such appearance is uncommon. It has then no central black eschar, no raised vesiculated border. It is described as "a small, slightly inflamed tumor, exuding only serosity; "giving rise to comparatively little pain or even increased sensibility, "but showing a tendency to set up a diffuse cellulitis."* Constitutional infection may follow.

NOTE D.

DR. DUPRÉ'S ANALYTICAL REPORT.

"I have carefully examined the various pieces of hides you left with me on July 7 with the following results:

"The Calcutta buffalo hide is cured with arsenic, but contains, comparatively speaking, but little of it.

* Report on "Woolsorters' Disease," in the Annual Report for 1880 of the Medical Officer of the Local Government Board.

"The Calcutta cow hide is also cured with arsenic, and contains a considerable quantity.

"The hide from Patna district is cured by sulphate of magnesia, of which there is very much contained in it, with a trace of nitre and traces of calcium salts.

"The Bombay hide is cured by common salt. It contains no nitre.

"Both samples of China hide are cured by arsenic, and contain a very considerable quantity.

"I made some attempts to estimate the quantities of arsenic present, but in the first place the pieces of hide at my disposal were rather small, and in the second place, even in these small pieces, judging from the qualitative results, the quantity seemed so to vary in different parts that the estimate would not have been of much, if of any, use, or might even have been misleading."

Laboratory,
Westminster Hospital,
London, S.W.
August 7, 1883.

NOTE E.

Copy of Notice issued by Messrs. Dyster, Nalder, & Co., Hide Brokers.

Notice to Workmen engaged in handling Raw Hides, &c.

Occasionally a hide or skin that has been removed from the carcass of a diseased animal is improperly packed with others, and danger of infection to man may arise from handling it. The poison may be absorbed through the skin; or, as dust, through the lungs; or, with food, through the stomach.

When absorbed through the skin, a tiny boil or pimple, containing only watery matter, but soon accompanied by much swelling, is formed. The favourite seat of this pimple is the neck, face, or arms; if it be neglected constitutional mischief may follow.

When absorbed internally, constitutional symptoms afford the first indication. These, at the commencement, are not unlike the symptoms of a feverish cold, except that there is more marked weakness and depression; generally too the breathing becomes, from time to time, oppressed; sometimes there is vomiting.

Experience shows that the danger of these conditions is greatly aggravated by neglect in the early stages, and the following rules are accordingly suggested to the workmen:

1. Apply caustic freely to any small wound, scratch, or open pimple. (*caustic is kept for the purpose at the warehouse*).
2. Apply at once for medical advice on the appearance of a pimple such as is described above; or, on the occurrence of the constitutional symptoms, whether or not a pimple be present on the skin.

From the first suspicion of mischief, let the following precautions be observed:

3. Avoid exciting the circulation by unnecessary exertion, or especially by any over-indulgence in living. For food, take only a little beef-tea, broth, milk, eggs, or the like; if any stimulant be taken let it be only a very little spirit. Avoid, for the time being, beer, vegetables, and fruit.

The following regulations and advice are applicable to all men employed:

4. Needlessly rough handling of the hides, so as to cause an unnecessary amount of dust, is to be avoided. Coats, &c., are not to be hung in the warehouse rooms, and dust should be brushed from other clothes before leaving work. Food is not to be taken in the warehouse rooms, and the cleansing of the hands before meals is advised.

No. 14.

On the Sanitary Aspects of Emigration and Immigration from and into the United Kingdom; and of the Intercommunication that takes place between the various Home Ports; by Dr. F. H. Blaxall.

PART I.

Introductory.

	Page
Cause and scope of inquiry	132
Co-operation of Board of Trade	132
Increase and development of Emigration; fluctuating character	133
Improved facilities of maritime transit	136
Commercial aspect	136
Sanitary aspect	136
Infectious disease likely to be spread by emigrants. Peculiarities and characteristics of such disease	136
Laws affecting emigration and immigration:	
Vaccination Acts	139
Public Health Acts	139
Quarantine Acts	140
Shipping and Passenger Acts	142
Charter-party of Colonial Governments	146
Table No. 1.—*Emigration from* 1815 *to* 1820 *and from* 1876 *to* 1881	133
„ 2.—*Rate per* 10,000 *of population during above periods*	133
„ 3.—*Total emigration from* 1871-81, *and destinations*	134
„ 4.—*Cabin and steerage passengers*	135

Cause of inquiry.

In consequence of the Local Government Board having received through the Foreign Office a despatch from Mr. Archibald, the British Consul-General of New York, on the subject of present extension of small-pox in the United States, stating that the belief was there entertained that it was largely contributed to by importation of the disease by immigrants arriving from this country and from the western parts of Europe, I was instructed by the Board to institute inquiry into the subject of emigration and immigration generally in its medical aspect, with reference specially to the risk of dissemination of infectious disease in our own country, and transmission thereof to other countries by means of ships clearing from our ports, as well as to any introduction of such disease into the United Kingdom from foreign countries. The inquiry was to include intermigrations by sea between the various ports of the United Kingdom, and to take cognisance of vaccination and re-vaccination as observed amongst emigrants and ships crews, small-pox being the disease specially referred to by the British Consul-General, who had forwarded, together with his despatch, an extract from the "New York Herald," containing the regulations adopted by the National Board of Health to the United States, requiring all unvaccinated emigrants, on arrival at the United States, to undergo "quarantine until they shall have "been properly vaccinated, or shall have passed the period of incubation "from date of last exposure;" together with a circular of the medical officer of health of New York requesting the shipping companies to take steps to secure the vaccination during the voyage of all persons requiring it.

Scope of inquiry.

Co-operation of the Board of Trade.

Upon the Local Government Board inviting the co-operation of the Board of Trade in the way of affording me information, and giving me introductions to their officers at the various ports, they at once suggested that their chief emigration officer, Captain Wilson, should be associated with me in the inquiry, and his practical knowledge of the Shipping and Passengers Acts and his acquaintance with the shipping companies have proved of great value to me.

Increase and Development of Emigration.

British emigrants and "transmigrants."

The emigration of the United Kingdom consists of two elements, which may be called for brevity, British and Foreign; the former including natives of Great Britain and Ireland, the latter all other nationalities who may elect to come over from the Continent for the purpose of re-embarking from one or other of the British ports for the United States, British North America, or other places, and who may therefore conveniently be termed "transmigrants," consisting principally of Germans, Poles, Russian Jews, Norwegians, Swedes, Danes, Finlanders, and Icelanders.

Increase of emigration.

During the last 50 or 60 years emigration has greatly increased and developed, until it has attained a very important position amongst the various branches of commerce that contribute to the wealth and prosperity of the United Kingdom, and it now forms the subject of special legislation. This increase will be best understood by reference to the subjoined table of statistics abstracted from the Board of Trade returns, showing the number of emigrants that left our shores for certain specified countries in the six years 1815–1820 (the earliest period, that is, of which we have any such record) side by side with corresponding statistics for the six years 1876–1881.

Table 1.—Number of Emigrants that embarked from British Ports for certain specified Countries in the two hexades 1815–1820 and 1876–1881.

Period.	Destination.					Mean of the respective Periods 1815–20 and 1876–81.
	United States.	British North America.	Australasia.	All other Places.	Total.	
1815–1820	50,359	70,438	No return.	2,731	123,528	20,588
1876–1881	920,954	121,862	193,185	111,826	1,347,827	224,637

Comparing the two periods it will be seen that since 1820 emigration has increased more than tenfold. The numbers of emigrants during the six years 1876–1881 being 1,347,827, against 123,528 for the six years 1815–1820.

Since 1853 the emigration returns have been made out under the before noted headings, British and Foreign, the latter element entering into the returns for the six years 1876–1881 to the extent of 29 per cent. of the total emigrants; whereas probably it was almost if not altogether wanting in the earlier period, 1815–1820. Again, excluding the foreign element and taking the total emigration of the first period to represent British subjects only (which may fairly be done), it will be seen by the subjoined Table No. 2 that, calculated upon the population, British emigration during the six years 1876–1881 stands at 280 per 10,000 against 60 per 10,000 for the first hexade (1815–1820), an increase of more than fourfold.

Table No. 2.

Period.	Estimated average Population.	Number of British Emigrants.	Rate per 10,000 of Population.
1815–1820	20,581,419	123,528	60
1876–1881	33,958,708	952,384	280

TABLE 3.—Showing the TOTAL AMOUNT of EMIGRATION from the UNITED KINGDOM, with the PLACES of DESTINATION, for the Eleven Years 1871–1881.

YEAR.	NUMBER OF EMIGRANTS.		TOTAL EMIGRANTS.	DESTINATION.				
	British.	Transmigrants or Foreigners.		United States.	British North America.	Australasia and New Zealand.	Cape and Natal.	All other Places.
1871	192,751	59,684	252,435	198,843	32,671	12,227	No return till 1877.	8,694
1872	210,494	84,719	295,213	233,747	32,205	15,876		13,385
1873	228,345	82,267	310,612	233,073	37,208	26,428		13,903
1874	197,272	43,742	241,014	148,161	25,450	53,958		13,445
1875	140,675	33,134	173,809	105,046	17,378	35,525		15,860
1876	109,469	28,753	138,222	75,533	12,327	33,191		17,171
1877	95,195	24,776	119,971	64,027	9,289	31,071	5,321	10,263
1878	112,902	34,761	147,663	81,557	13,836	37,214	4,930	10,126
1879	164,274	52,889	217,163	134,590	22,509	42,178	7,665	10,221
1880	227,542	104,752	332,294	257,274	29,340	25,438	9,803	10,439
1881	243,002	149,512	392,514	307,973	34,561	24,093	14,229	11,658
Total	1,921,921	698,989	2,620,910	1,839,824	266,774	337,199	41,948	135,165

It will be seen by the above table that emigration is subject to considerable fluctuations, the total number of emigrants increasing from 252,435 in 1871 to 310,612 in 1873; then decreasing annually, till in 1877 it reached the minimum of 119,971, after which an annual increase is observed raising the total of 1881 to 392,514, a number which bids fair to be surpassed in the present year 1882, the returns for the six months, January to June, standing at a total of 245,031, against 211,113 for the corresponding period of 1881.

The rate of advance of emigration from 1877 to 1881 is shown to be more than twice as much amongst "transmigrants" than British emigrants, while the fluctuations in the annual tide of emigration affect mainly the United States, the number of emigrants arriving there in 1881 amounting to 307,973, against 64,027 in 1877.

Number of passengers to Australasia.

The highest number of emigrants for the Australasian Colonies was in 1874, amounting to 53,958, whereas other specified places exhibit a marked decrease in that year compared with the three preceding years. The statistics for the Cape and Natal are not given till 1877, when the number of emigrants is returned at 5,321, rising to 14,229 in 1881.

If the flow of emigration were steady and continuous throughout the year, 1,052 persons would have left our shores daily in 1881 for foreign countries; but so far from its being of this regular character, emigration has its busy and slack times; the months of April, May, and June being the season of its greatest activity. Not a little sanitary importance attaches to this circumstance.

Number of cabin and steerage passengers.

Another point to be considered in connexion with the health aspect of the question is the relative class of the passengers that embark from our ports; cabin passengers having distinct sleeping and living accommodation, and enjoying the advantage of a larger amount of cubic space than is allotted to steerage passengers.

The subjoined Table No. 4 is prepared to show the number of cabin and steerage passengers respectively, with the ports sailed from, in each of the six years 1876–1881, there being no record for previous years.

The comparatively large number of cabin passengers that start from Southampton is accounted for by this being the port of departure for the mail steamers to various parts of the world.

Table No. 4.

Port of Departure.	1876.			1877.			1878.			1879.			1880.			1881.		
	Cabin.	Steerage.	Total.	Cabin.	Steerage.	Total.	Cabin.	Steerage.	Total.	Cabin.	Steerage.	Total.	Cabin.	Steerage.	Total.	Cabin.	Steerage.	Total.
Liverpool -	23,561	42,885	66,446	20,662	34,313	54,975	23,946	47,146	71,092	23,967	93,950	117,917	27,432	156,150	183,582	30,822	198,050	228,872
London - -	7,087	16,224	23,311	7,640	12,528	20,168	9,366	16,359	25,725	10,305	21,958	32,263	12,311	26,058	38,369	12,492	32,125	44,617
Glasgow and Greenock	2,588	10,179	12,767	2,166	7,841	10,007	2,596	11,389	13,985	2,214	18,317	20,531	2,750	26,340	29,090	2,787	39,349	42,136
Cork and Queenstown -	357	9,295	9,652	404	7,128	7,532	442	8,617	9,059	568	13,907	14,475	650	43,397	44,047	582	33,228	33,810
Plymouth & Dartmouth	261	11,945	12,206	524	15,331	15,855	622	14,767	15,389	888	14,966	15,854	881	9,465	10,346	1,147	10,066	11,213
Southampton - -	7,375	2,372	9,747	5,079	2,678	7,757	5,075	2,537	7,612	5,339	3,513	8,852	5,973	3,320	9,293	5,382	6,834	12,216
Other ports - -	671	3,422	4,093	672	3,005	3,677	1,121	3,680	4,801	647	6,624	7,271	737	16,830	17,567	1,058	18,592	19,650
Total - -	41,900	96,322	138,222	37,147	82,824	119,971	43,168	104,495	147,663	43,928	173,235	217,163	50,734	281,560	332,294	54,270	338,244	392,514

Improved Facilities of Maritime Transport.

Improved facilities of maritime transport.

The increase and development of emigration until it had become an important branch of trade called for greater facility of transport. The old wooden sailing ships, which in their day did good service, were uncertain in their movements, being dependent upon the wind and currents, and, moreover, were of such limited capacity, carrying from 700 to 900 passengers only, that they were unequal to the requirements of a rapidly increasing traffic; hence, in process of time this class of vessel has had to give way to the magnificent steamers of the present day, which are to ocean traffic what railways are to land carriage in the way of economising time, and so reducing distance and bringing all parts of the world, as it were, closer together. For example, the voyage from London to Australia, which formerly occupied about 80 to 100 days, is now accomplished in 50 to 60 days; in like manner, that from Liverpool to New York is reduced from four or five weeks to ten or twelve days, and the same with regard to other places. The duration of any passage can be calculated with such nicety that the day of arrival at any specified port may be almost precisely determined. Together with these advantages may be considered the increased capacity and superior internal economy of the present ships, affording accommodation for some thousand to fifteen hundred or more passengers.

Commercial aspect.

In a commercial point of view the movements of such vast numbers of people as annually leave our shores is a matter of considerable importance, affecting, mainly and directly, shipping and railway interests, indirectly, shipbuilding, mechanics, and other branches of industry, besides giving employment to passage-brokers, emigrant runners, lodging-house keepers, and others; while, in connexion therewith, may be mentioned, as a matter of interest, the vast sums of money annually remitted by settlers in the United States and British North America to their friends in the United Kingdom, amounting in the 34 years 1848–81 to 25,016,463*l.*, exclusive of 336,196*l.* sent home from Australasia during the seven years 1875–81 (the first period for which any return of the kind is given).

On the other hand, increase of emigration may sometimes be taken as indicative of depression in industries at home, inducing the labouring population to seek employment in the Colonies or other countries where there is known demand for labour, there to remain until such time as, the condition of things improving at home, they are tempted to return, in this way swelling the emigration and immigration lists. I have observed examples of this notably among the miners of Cornwall.

Sanitary aspect.

The present inquiry, however, being concerned with the sanitary and not the commercial aspect of the question, the extent to which emigration is likely to endanger public health by introducing and spreading infectious disease, has now to be considered, and in order to the better understanding of the subject it is desirable to enter briefly into the nature and characteristics of diseases of this class.

Infectious Disease.

Certain dangerous diseases are capable of being spread by personal intercommunication between sick and healthy, or through the medium of infected clothing, bedding, and other channels. Of these diseases which are characterised as contagious or infectious, some appear to be indigenous to this country, such as small-pox, measles, scarlatina, diphtheria, typhus and enteric fevers, which are more of less usually present; others belong more exclusively to foreign countries, and the diseases of this group,

such as yellow fever, plague, and cholera, do not appear in our own country till introduced from without. Yellow fever, though from time to time brought into our ports, has never gained a footing here, two or three outbreaks of small dimensions only having occurred. On the other hand, plague and cholera have now and again raged with fearful fatality. The plague indeed was endemic in this country in the seventeenth century, with occasional severe epidemic outbreaks: that known as the "Great Plague" occurring in 1665, when about 68,500 persons fell victims to it in the city of London and its suburbs alone. The last recorded death from plague in the metropolis was in 1679.

Cholera in more recent years has prevailed in England with fatal severity, notably in the years 1831 and 1848, and again in 1854, when upwards of 10,000 persons died of it in the metropolis alone. Dr. W. Farr estimates that little less than five millions of the people of the United Kingdom were attacked by cholera or diarrhœa in the epidemics of 1848–1849 and 1853–1854, and that a quarter of a million of those so attacked died. The last epidemic of cholera was in 1866; but occasional cases have since been witnessed in English ports from time to time.

These several diseases, while all in a greater or less degree contagious or infectious, possess distinctive characteristics which exercise important bearing on the danger and manner of spread.

(1.) *As to indigenous disease:—*

Means of spread.

Small-pox, measles, scarlatina, and typhus fever are mainly spread by means of personal contact with infected persons or infected articles of clothing, bedding, and the like, each new case offering a fresh centre of infection.

Small-pox possesses a very wide territorial range, establishing itself wherever introduced, and spreading rapidly and fatally; it is of all the above-named indigenous diseases the most highly contagious and fatal, proving a terrible scourge to the human race until the discovery by Jenner at the close of the eighteenth century of the prophylactic vaccination, which has robbed the disease of much of its danger and fatality.

Diphtheria is undoubtedly spread by infection from person to person, and possibly by other channels also, but the knowledge possessed on the subject is too limited at present to enable a definite opinion to be expressed.

Enteric fever so far differs from the above, in that the fever poison is usually spread through the agency of air or water that has become specifically contaminated by the bowel discharges of the sufferers.

(2.) *As to foreign diseases:—*

Yellow fever and plague are communicable from person to person; each disease showing some specialities of its own in the circumstances which influence its spread.

Cholera, like enteric fever, is mainly spread by means of specifically infected air or water.

Period of incubation.

In all infectious diseases a certain time elapses between the reception of the specific poison into the system and the manifestation of the symptoms, called the incubating period, and varying according to the nature of the disease. In small-pox, measles, typhus and enteric fever this latent stage is comparatively long, viz., from 10 to 14 or 15 days. In scarlatina it is shorter, being sometimes one or two days but usually

varying from four to six days; and in diphtheria from two to four days. Yellow fever has a latent period of from one to 14 days. The plague is believed to have a largely variable incubating time, viz. from a few hours to 20 days, and cholera from two to 10 or 11 days.

Particulars of cholera.

My own experience as regards cholera, gained under circumstances favourable for observation, may be interesting. In 1850, while serving on board H.M.S. "Caledonia," 120 guns and 1,000 men, cholera broke out in the ship, which, together with the remainder of the fleet, was at anchor in Malta Harbour, the disease at the time being epidemic on shore, where it caused about 1,600 deaths. The first case in the fleet occurred on board the "Caledonia" on the 15th of June, four other cases occurred in that month, and the other ships were also invaded, in all some 40 or 50 cases occurred before the 3rd July, many of them proving fatal. On the 3rd July the ships went to sea. Fresh cases continued to occur in the "Caledonia" till the 8th, *i.e.*, five days after sailing, while in other of the ships fresh cases continued for 10 days; after this there was no fresh case, and the ships got absolutely free of cholera, continuing so for some two or three weeks. On the 30th July the "Caledonia" re-entered Malta Harbour, but left there again on the 1st of August, and on the 4th a fresh case of cholera appeared on board, followed by six others between the 4th and 14th, then no fresh case till the "Caledonia" for the second time went into Malta Harbour on the 2nd of September, remaining till the 4th. On that day a fresh case appeared followed by four others, but 10 days after this, the ship being at sea, cholera had disappeared. The men were medically inspected morning and evening, impending attacks were detected, and prompt measures of isolation and treatment were adopted.

Precisely similar behaviour of cholera was observed in the other ships.

Conditions favouring the spread of disease.

Without attempting to enter upon the question as to whether any of the foregoing diseases can arise de novo, it is a recognised fact that their presence is intimately associated with unwholesome conditions, such as impure air and water, overcrowding, insufficient ventilation, dirty dwellings, want of personal and general cleanliness, and the like, the causes themselves suggesting the line of remedy to adopt to keep such diseases in abeyance, while it may be gathered, from what is here stated with reference to the nature, characteristics, and manner of spread of infectious disorders, that much of the danger of their becoming widely diffused lies in the insidious way in which the infection is conveyed, it being quite possible for persons to contract disease by visiting infected persons or by unwitting exposure to infection in various ways, and yet not be made aware of the fact until some days afterwards, when the symptoms begin to develop, in the meantime going about mixing with others as usual. And even when the symptoms do manifest themselves, it often happens that, owing to the nature of the attack not being known, or from a reckless disregard to consequences, no steps are taken to prevent the further spread of the disease.

Danger to health.

Following up this argument we are led to recognise considerable danger as attending the movements of the vast body of emigrants that annually leave our shore for distant countries, rendering the adoption of precautionary measures to prevent the spread of disease through their agency a question not merely of national, but international importance.

In this country the paramount duty of providing for the protection and preservation of the health of the people has been recognised by the State, and various Acts of Parliament passed having for their object,

amongst other things, the prevention of disease. And the efforts of the Legislature in this direction have been attended with practical good results, as anyone may satisfy himself who will study the Registrar-General's Death Returns for recent years and observe the changes in rate of mortality from all causes and particularly from those causes that are most amenable to public sanitary operations.

Statutory Enactments relating to Public Health, Shipping, and Passenger Traffic.

Laws affecting emigration and immigration directly or indirectly.

The various Acts passed by the Legislature with regard to vaccination, public health, and quarantine, and the Shipping and Passengers Acts have important bearing on the sanitary conditions of emigration, and in connexion with these may be mentioned the charter-parties of certain of the Colonial Governments for the conveyance of emigrants to their respective Colonies.

As to the Vaccination :—

Vaccination Acts.

The law renders infantile vaccination compulsory, requiring in England that every child shall be vaccinated before it is three months old, or at the next public vaccination held in the district after the child has attained that age. In Scotland and Ireland the age is fixed at six months.

As a rule, the Acts are efficiently administered, and few children now escape vaccination.

Many foreign nations, also, have passed Acts rendering vaccination compulsory, but the ages adopted are higher than in the United Kingdom. For example, the German Imperial Vaccination Law of 1874 requires vaccination for all children before the end of their second year of life ; in Sweden the age is two years ; while in Holland there is no compulsory law, but a child is not admitted to a commercial school until it has been vaccinated.

In view of transmigrant families usually including infants and young children, the deferring of vaccination is a point not to be overlooked.

As to Public Health Administration generally :—

Public Health Act.

England, Scotland, and Ireland have distinct Public Health Acts, differing somewhat in detail, but the same in principle. The administration of these Acts is entrusted to local authorities exercising jurisdiction over certain defined areas, including in England port sanitary districts. The port sanitary authority is, in Ireland, styled port nuisance authority. In Scotland there are no constituted port sanitary authorities, but ships in any river, harbour, or other water are subject to the local authority of the district within or ex-adverso of which such river, harbour, or other water is situate. It will suffice here to refer to such sections only of the Public Health Act, 1875, (England,) as are more specially important with regard to emigrants, and deal with common lodging-houses, houses let in lodgings, nuisances, and infectious disease prevention.

Lodging-houses.

(*a.*) *Common lodging-houses.*—Every local authority is required to keep a register of all common lodging-houses within the district of such authority, and to "make byelaws (1) for fixing and from time " to time varying the number of lodgers who may be received into " a common lodging-house, and for the separation of the sexes therein ; " and (2) for promoting cleanliness and ventilation in such houses ; " and (3) for the giving of notices and the taking precautions in the

"case of any infectious disease; and (4) generally for the well-ordering "of such houses."

Further, the keeper of a common lodging-house is required, when a person in such house is ill of fever or any infectious disease, to give immediate notice thereof to the medical officer of health of the local authority, and also to the poor law relieving officer of the union or parish in which the common lodging-house is situated.

(*b.*) *Houses let in lodgings.*—The Local Government Board may empower any local authority to make byelaws as to the cleansing, keeping, and regulating of "houses let in lodgings" in contradistinction to common lodging-houses.

Nuisances.

(*c.*) *Nuisances.*—Provision is made under this head, for enforcing the keeping of dwellings and their precincts free from "nuisances injurious to health," such nuisances being defined as including, amongst other things, over-crowding in dwellings, and foul privies.

The authority are required to cause to be made from time to time inspection of their district, with a view to ascertain what nuisances exist calling for remedial action. For the purposes of the Act relating to nuisances, a ship is considered as a dwelling-house, and it is part of the duty of port sanitary authorities to have inquiry made as to the sanitary condition of ships coming within their district, and to take the necessary steps to have any nuisances that may be discovered abated.

Disease prevention.

(*d.*) *Disease Prevention.*—Persons are made liable to penalties for the wilful exposure of infected persons or things; for neglecting to provide for the disinfection of public conveyances; for knowingly letting for hire any house, room, or part of a house in which any person has been suffering from dangerous infectious disease, without having such house, room, or part of a house, and all articles therein liable to retain infection, disinfected. Further, local authorities are required to secure the cleansing and disinfection of infected dwellings, and are empowered to direct the destruction of infected bedding, clothing, or other articles, and to give compensation for the same; they are also empowered to provide hospitals for the reception of cases of infectious disease ambulances for the conveyance of the sick, disinfecting apparatus and mortuaries, and to secure the removal to hospital of any persons suffering from dangerous infectious disorder who are without proper lodging or accommodation, or brought within their district by any ship or boat.

As to the Prevention of the Importation of Disease from Shipboard:—

(1.) *Quarantine.*—The provisions relating to quarantine (6 Geo. 4. c. 78., 35 & 36 Vict. c. 79. sched. V., re-enacting s. 52. of 29 & 30 Vict. c. 90., and 39 & 40 Vict. c. 36. s. 234), are administered by the Commissioners of Customs, under the Orders of Her Majesty in Council or of the Privy Council; the principal Order now in force being that of the 19th July 1825. Under this Order the masters of all ships coming foreign are bound, under penalty, to answer certain questions put to them by the officers of customs, as to the places from which they have come and as to the health of the crew and passengers. The other provisions of the Quarantine Acts, although susceptible of much wider application, have for some years been put in force only with regard to plague and yellow fever, and rather for the purpose of satisfying the exigencies of foreign nations, and preventing the inconvenience to trade which would

result therefrom, than with the view of preventing the importation of those diseases.

(2.) *Medical Inspection*, under the orders of the Local Government Board, in regard to England; of the Privy Council, in regard to Scotland; and of the Lord Lieutenant, in regard to Ireland, with reference to diseases, such as cholera, not ordinarily present in the United Kingdom.

Under the provisions of the Public Health Act, 1875, relating to England, and under similar provisions of the Public Health Acts for Scotland and Ireland, regulations may be made for preventing the spread of cholera or any other endemic, epidemic, or infectious disease, and such regulations may apply to vessels within three miles of the coast. Orders issued in 1873 with regard to cholera, which are still in force, require the officer of customs on ascertaining or suspecting that a ship is infected with the disease to detain the ship, and inform the sanitary authority within whose jurisdiction the ship lies. The ship and the persons therein are then to be visited and examined by a medical officer; persons found to be suffering from the disease are to be removed to hospital, or if they cannot be removed, are to remain on board under the control of the medical officer; persons suffering from a disease suspected to be cholera may be detained for two days, in order to ascertain whether the suspicion is well founded. The bedding and clothing of persons who have suffered from the disease are to be disinfected or destroyed; and the ship, and other articles therein, so far as may be deemed necessary, is also to be disinfected.

The distinction, which should be noted, between this system and quarantine is that, in the latter, all ships which, according to the general rules laid down, were considered as likely to introduce disease were subjected, with their crews, passengers, and cargo, to certain prescribed measures of detention and disinfection; whereas in the former the circumstances of each particular case are to be the subject of examination, conducted by skilled officers, and each case is to be dealt with as this examination may show to be necessary.

A further distinction between the two systems should be had in view. Quarantine is administered by the officers of customs. The duty of carrying out medical inspection is imposed on the local sanitary authorities, including the special port authorities, of the places where a ship touches or ends its voyage. Although, however, this duty is imposed on the local sanitary authority, it is through the officers of customs, acting under the Quarantine Acts, and Order, that, in most cases, information is most generally obtained as to the existence of disease.

(3.) *Precautionary measures* for preventing the introduction of disease by ships, in the case of diseases ordinarily present in the United Kingdom, and as to which no special orders of the Local Government Board are in force.

The systems described in (1) and (2) of this section have reference to diseases such as plague and yellow fever (in the case of quarantine) and cholera (in the case of medical inspection), against which, as they are not constantly present in this country, extraordinary measures of precaution may reasonably be taken; but as cases of ordinary infectious disease are often present on board both of foreign-going ships, and of coasters, the local sanitary authorities have the necessary powers for dealing with ships coming within their jurisdiction, so as to prevent as far as possible the spread of disease from them. The removal to

hospital of any person on board suffering from a dangerous infectious disease, and the disinfection of the ship, and of any articles therein requiring disinfection, as if the ship were an ordinary dwelling-house, can be enforced; and for the performance of these ordinary duties in regard to infectious diseases on shipboard, provision is made in the Board's orders as to the medical officers of health and inspectors of nuisances of port sanitary authorities for the examination of shipping and the periodical reporting thereon.

Shipping and Passengers Acts.

Health of Ships: The Merchant Shipping and Passengers Acts:—

Shipping Acts.

These Acts were passed by the Legislature in the years 1854, 1855, and subsequent Acts amending the same. The Shipping Acts are administered by the local marine boards under the supervision of the Board of Trade. These Acts make permissive provision for the medical inspection of crews before sailing; also, they require that each ship shall be supplied with medical stores, anti-scorbutics, lime-juice, vinegar, sugar, &c., the same to be duly examined by medical inspectors appointed by the Board of Trade or local marine board. Further, provision is made for the proper accommodation of the crew, regulating the superficial space to be allotted to each seaman, and requiring that due regard shall be paid to the construction, ventilation, light, and cleanliness of the portion of the ship set apart for their occupation, and that the same shall be kept clear of ship's lumber (ss. 224–231). Foreign-going ships carrying 100 persons or upwards are required to carry a duly qualified medical practitioner (s. 230).

Passengers Acts.

The Passengers Acts were formerly executed by the Emigration Commissioners, but the duties have since been transferred to the Board of Trade. They extend to every passenger ship proceeding on any voyage from the United Kingdom to any place out of Europe, and not being within the Mediterranean Sea, and to any ship bringing passengers into the United Kingdom. The expressions steerage passengers and emigrants are synonymous, and do not include cabin passengers.

The following abstract of certain clauses of the Passengers Acts will suffice to show the regard had to minute details concerning the arrangements of the ship, and other matters relating to the comfort and health of the passengers and crews.

Clearance of Ships.

It is enacted that no "passenger ship" shall clear out or proceed to sea until the master thereof shall have obtained from the emigration officer at the port of clearance a certificate that all the requirements of the Act, so far as the same can be complied with before the departure of such ship, have been duly complied with; and that the ship is seaworthy and fit for her intended voyage, and that her passengers and crew are in a fit state to proceed (s. 11).

That no ship shall carry under the poop or on the upper passenger decks a greater number of passengers than in the proportion of one statute adult to every 15 clear superficial feet of deck allotted to their use. And that no ship shall carry on her lower passenger deck a greater number of passengers than in the proportion of one statute adult to every 18 clear superficial feet of deck allotted to their use, where the height between such lower deck and the deck above it is 7 feet; but where the height between these decks is less than 7 feet, or the apertures (exclusive of side scuttles) through which light and air shall be admitted to the lower passenger deck less in size than in the proportion of 3 square feet to every 100 superficial feet of the lower passenger deck, no greater number of passengers shall be carried on such deck

than in the proportion of one statute adult to every 25 clear superficial feet thereof (s. 14).

That there shall not be more than two tiers of berths on any one deck in any "passenger ship" allowing an interval of not less than 6 inches between the floor of the berths and the deck immediately beneath them, nor less than 2 feet 6 inches between each tier of berths and between the uppermost tier and the deck. No part of the berth to be within 9 inches of any watercloset erected in the between decks (s. 21). That single men of 14 years and upwards shall be berthed in a separate compartment. That not more than one passenger, unless husband and wife, or females or children under 12 years of age, shall occupy the same berth (s. 22). Sleeping berths.

That in every passenger ship there shall be a sufficient space properly divided off to be used exclusively as a hospital or hospitals for the passengers: this space to be situated under the poop, or in the round house or in any deck-house, or on the upper passenger deck, and not elsewhere, and in no case to be less than 18 clear superficial feet for every 50 passengers. Such hospitals to be fitted with bed places, and supplied with proper beds, bedding, and utensils, and throughout the voyage kept so fitted (s. 24). That every "passenger ship" shall be duly ventilated and lighted to the satisfaction of the emigration officer at the port of clearance (s. 31). Hospitals.

That no passenger ship shall proceed to sea with any cargo or ballast or other articles on board likely to endanger the health or lives of the passengers or the safety of the ship (s. 29). Cargo endangering health.

That the provisions and water supply shall be sufficient in quantity and of good wholesome quality, and shall be issued regularly according to the dietary scale set forth in the Act (ss. 31–35). Provisions and water supply.

That every passenger ship shall in the following cases carry a duly qualified medical practitioner: First, when the duration of the voyage exceeds 80 days in the case of sailing ships and 45 days in the case of steamships, and the number of passengers on board exceeds 50: Second, whenever the number of persons on board exceeds 300 (ss. 41, 42). Medical practitioner to be carried.

That the owner or charterer of every passenger ship shall provide for the use and medical treatment of the passengers a supply of medicines, medical comforts, instruments, and other things, including a supply of disinfecting fluid or agent, &c., the same to be of good quality and sufficient in quantity for the probable exigencies of the voyage (s. 43). Medicines and medical comforts, &c.

That no "passenger ship" shall proceed to sea until some medical practitioner, to be appointed by the emigration officer, shall have inspected such medicines, medical comforts, &c. &c. as are required by the preceding section, and also all the passengers and crew, and shall have certified that the medicines, &c. are of good quality, &c., and that the passengers and crew are in a fit state of health to proceed in the ship. Such medical inspection to take place either on board the vessel, or at the discretion of the emigration officer, at such convenient place on shore as he may appoint; the master or owner or charterer of the ship to pay to such emigration officer a sum at the rate of twenty shillings for every hundred persons so examined (s. 44). Medical inspection. Fees to be paid for medical inspection.

That the emigration officer at any port shall prohibit the embarkation of any person who by reason of sickness or other cause is unfit to proceed on the voyage, or is likely to endanger the health or safety of the other passengers, or if embarked shall require him to be relanded; Persons suffering from infectious disease to be relanded.

and if such emigration officer be satisfied that it is necessary for the purification of the ship that all or any of the passengers or persons on board should be relanded, he may require the same to be done (s. 45).

Passage money to be returned.

That any passengers so relanded on account of sickness who may not finally sail in such ship shall be entitled to recover the whole of their passage moneys (s. 46).

Sum allowed for subsistence of persons relanded.

That each passenger, reckoning as a statute adult relanded under s. 45 shall receive subsistence money at the rate of one shilling and sixpence per day until he shall be re-embarked or until his passage money, if recoverable under the preceding section, be returned to him (s. 47).

That in the case of any ship not sailing at the appointed time, every passenger entitled to a passage shall be paid subsistence money after the rate of one shilling and sixpence per day for each statute adult in respect of each day of delay for the first ten days, and afterwards three shillings per day until the final departure of such ship on her voyage (s. 49).

Regulations for preserving order, cleanliness, &c.

Further Her Majesty is empowered by Orders in Council to prescribe rules for preserving order, promoting health, and securing cleanliness and ventilation on board of passenger ships.

Emigration prohibited during prevalence of certain epidemic diseases.

For prohibiting emigration from any port or ports at any time when choleraic or any epidemic disease may be generally prevalent in the United Kingdom or any part thereof, &c., and for requiring duly qualified medical practitioners to be carried in passenger ships, in cases where they would not be required to be carried under the provisions of this Act (s. 59).

Passage brokers.

As to passage brokers:—It is enacted amongst other things that no person whatever shall directly or indirectly act as a passage broker without a license (s. 66). Such license to be obtained by application to the justices at the petty sessions agreeably to the requirements set forth in s. 67.

Emigrant runners.

In like manner, as to emigrant runners:—That any person acting as an emigrant runner without having been previously duly licensed and registered shall be liable to a penalty for each such offence (s. 75).

Contract ticket.

Lastly, s. 71 provides for the issuing of contract tickets to cabin and other passengers. The contract ticket to be made out on a printed form in accordance with the form contained in Schedule K. for cabin passengers, and Schedule L. for all other passengers, and to be signed by the owner, charterer, or master of the ship.

Schedule L.

Passenger's Contract Ticket.

These Directions, and the "Notices to Passengers" below, form Part of, and must appear on, each Contract Ticket.

1. A Contract Ticket in this Form must be given to every Passenger engaging a Passage from the United Kingdom to any Place out of Europe, and not being within the Mediterranean Sea.
2. The Victualling Scale for the Voyage must be printed in the Body of the Ticket.
3. All the Blanks must be correctly filled in, and the Ticket must be legibly signed with the Christian Names and Surname and Address in full of the Party issuing the same.
4. The Day of the Month on which the Passengers are to embark must be inserted in Words and not in Figures.
5. When once issued, this Ticket must not be withdrawn from the Passenger, nor any Alteration, Addition, or Erasure made in it.

Ship_____

Counterpart of Passenger's Contract Ticket.

This Part of the Contract Ticket is to be separated from the other, and to be delivered by the Passenger to the Emigration Officer at the Port of Embarkation, (or, if no such Officer, to the Officer of Customs,) or to any one appointed by him to receive it, under a Penalty not exceeding £10.

Contract Ticket.

I engage that the Persons mentioned below shall be provided with a Steerage Passage to _____ and be landed at the Port of _____ in _____ in the Ship _____ of _____ Tons with not less than Ten Cubic Feet for Luggage for each Statute Adult, and shall be victualled during the whole Voyage according to the Dietary Scale prescribed by Law. The Ship to receive her Passengers at _____ on the _____ Day of _____ 185_. Passage Money, including Government Dues, if any, and all Charges of Landing £_____.

Names.	Ages.

_____ Souls, equal to *_____ Statute Adults.

To be signed in full by the Party issuing the Ticket. _____

Ship_____ of_____ Tons Register, to take in Passengers at_____ for_____ on the_____ Day of_____ 185_.

Names.	Ages.	Equal to Statute Adults.

I engage that the Person named in the Margin hereof shall be provided with a Steerage Passage to, and shall be landed at, the Port of_____ in_____ in the Ship_____ with not less than Ten Cubic Feet for Luggage for each Statute Adult, and shall be victualled during the Voyage and the Time of Detention at any Place before its Termination, according to the subjoined Scale, for the sum of £_____ including Government Dues before Embarkation, and Head Money, if any, at the Place of Landing, and every other Charge, except Freight for Excess of Luggage beyond the Quantity above specified, and I hereby acknowledge to have received the sum of £_____ in { full / part } Payment.

The following Quantities, at least, of Water and Provisions (to be issued daily) will be supplied by the Master of the Ship, as required by Law; viz., to each Statute Adult 3 Quarts of Water daily, exclusive of what is necessary for cooking the Articles required by the Passengers Act to be issued in a cooked State; and a Weekly Allowance of Provisions according to the following Scale:

[Here insert the Victualling Scale intended to be used on the Voyage. This must be either the Scale prescribed in the 35th Section of the Passengers Act, 1855, or that Scale modified by the Introduction of Articles authorised by the Act, to be substituted for Oatmeal, Rice, and Potatoes.]

[N.B.—If Mess Utensils and Bedding are to be provided by the Ship, the Stipulation must be inserted here.]

Signature in full _____

Place and Date_____

[If signed by a Broker or Agent, state on whose Behalf.]

Deposit £_____

Balance £_____ to be paid at_____

Total £_____

Notices to Passengers.

1. If Passengers, through no default of their own, are not received on board on the Day named in their Contract Tickets, or fail to obtain a Passage in the Ship, they should apply to the Government Emigration Officer at the Port, who will assist them in obtaining Redress under the Passengers Act.
2. Passengers should carefully keep this Part of their Contract Ticket till after the End of the Voyage.

N.B.—This Contract Ticket is exempt from Stamp Duty.

* Insert Number of Souls and of Statute Adults respectively.

App. A. No. 14.

On Emigration and Immigration, &c.; by Dr. Blaxall.

Charter-parties.

As to the "charter-parties" of certain Colonial Governments :—

The Canadian, Cape, Natal, Tasmanian, and New Zealand Governments grant free or assisted passages to intending emigrants from the United Kingdom, making arrangements with certain of the shipping companies for their conveyance to the respective Colonies ; while New South Wales, South Australia, and Queensland charter ships for this purpose. (The Colony of Victoria has not granted any passage to emigrants since 1873.)

The conditions of the several "charter-parties" are very precise, stipulating, amongst other provisions, that the ship shall be fitted with sufficient scuttles, deck lights, and ventilation ; also with proper bed places, seats, tables, waterclosets, hospitals, baths, &c., &c. That the between decks shall be divided into three compartments only, viz., for single men, married couples, and single women, and that there shall be at least one separate hatchway and ladderway from each compartment to the upper deck. That the provisions and water shall be of the best quality and of sufficient quantity and shall be issued during the voyage agreeably to a fixed scale, also that a cabin properly fitted up shall be provided for the surgeon superintendent, who is appointed by each Colonial Government and entrusted with the care of the emigrants during the voyage, special instructions being issued for his guidance (which will be herein-after referred to at length). New South Wales "charter-party" provides for three hospitals, viz., one each for single women, married women and children, and men, to be placed on the upper deck when practicable. Queensland "charter-party" prohibits any hospital being situated between decks.

PART II.

Emigration Practice on Shore and on Shipboard.

	Page
Particulars of emigration inquiry, including description of route of emigrant from his home to destination :	
How he engages his passage	146
Emigration ports	147
Shipping companies	147
Continental ports of embarkation	147
Passage in continental steamers	147
Ports of debarkation	151
Process of debarkation	151
Land transit	151
Lodging-house accommodation and infectious hospital provision at the several ports	152
Embarkation of emigrants	158
Ocean ships	158
Manning the ships	162
Table No. 5.—*Relative importance of ports of embarkation*	148

Intending emigrants (initiatory proceedings).

The several shipping companies keep the subject of emigration before the eyes of the public by advertisement in the newspapers and placards posted up in frequented places, instructing intending emigrants to apply for detailed information to their various agents established throughout the United Kingdom, who are authorised on payment of a deposit to enter into contract with them in accordance with the terms set forth in the "contract ticket" prescribed by the Passengers Act, a copy of which is given to the intending emigrant to be retained by him to the

end of the voyage, while the counterpart thereof is to be delivered up to the emigration officer at the port of embarkation. Emigrants are instructed to attend at the company's offices either on the morning of embarkation or on the previous day, to pay the remainder of the passage money, and so complete the contract.

Transmigrants.

A similar course is pursued with regard to transmigrants; these negotiate with the company's agent for passage to the United States or elsewhere, as the case may be, the contract to include transit to the United Kingdom, thence by rail to port of embarkation, subject to detention there, pending the sailing of the ocean steamer, when they are lodged and boarded at the company's expense.

Colonial emigrants.

The Agents-General of the several Colonial Governments have established agents in various parts of the United Kingdom, who are empowered to furnish particulars to intending emigrants applying for free or assisted passages to the Colonies. But before these can be granted the applicants are required to satisfy the Agents-General as to their state of health, their character, capabilities as workmen, &c.

Emigration port visited.

In order to make myself thoroughly acquainted with the sanitary circumstances connected with this subject, I visited, in company with Captain Wilson, the principal emigration ports of the United Kingdom, namely, London, Liverpool, Plymouth, Glasgow, Greenock, Leith, and Queenstown, with ports of less note, interviewing the representatives of the various shipping companies, and inspecting the emigrant lodging-houses, infectious hospitals, and many of the passenger ships, witnessing the embarkation of emigrants.

Shipping companies.

The principal shipping companies engaged in the emigration traffic, and the ports from which their ships sail, are as follows:—

The Monarch, National, Orient, Castle, Union, and Royal Indian sail from London to all parts of the world, certain ships calling at Southampton, Dartmouth, and Plymouth to pick up passengers.

The Cunard, White Star, Indian, National, Guion, American, Dominion, Beaver, and Lake Line sail from Liverpool mainly to the United States and British North America, calling at Queenstown.

The Anchor, State, and Allen Line from Glasgow and Greenock for all parts, calling at Londonderry and Belfast.

The subjoined Table No. 5 is prepared to show the relative importance in the passenger traffic of the principal emigration ports for a period of eleven years, 1871–81.

It will be seen that in eight years out of the eleven a larger number of emigrants embarked from Liverpool than from all the other ports put together, and that for the whole period the total emigration from Liverpool was 1,486,538, against 1,134,372 from all other ports, an excess of 351,166 emigrants

Continental ports.

The principal continental ports are Hamburgh, Christiana, Gottenburgh, Copenhagen, and Bremenhaven, whence passengers are brought mainly to Hull, a fewer number to London, Leith, and Granton, and still fewer to Newcastle and Sunderland.

Continental steamers.

The continental steamers engaged in this traffic are:—The Wilson Line that bring passengers from Hamburgh, Copenhagen, and Gottenburgh to Hull.

The Bremen Line, from Hamburgh to London.

The Currie Line, from Hamburgh, Copenhagen, and Bremenhaven, to Leith or Granton.

The Slimon Line, from Iceland to Leith or Granton.

TABLE No. 5.—NUMBER of EMIGRANTS (British and Foreign) embarked from SPECIFIED PORTS of the UNITED KINGDOM for PLACES out of EUROPE, and not within the MEDITERRANEAN SEA, in each of the eleven years 1871–81.

PORTS OF DEPARTURE.	NUMBER OF EMIGRANTS THAT SAILED IN EACH OF THE 11 YEARS.											
	1871.	1872.	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	TOTAL.
Liverpool	166,166	195,776	190,157	122,015	89,540	66,446	54,975	71,092	117,917	183,582	228,872	1,486,538
Other Ports—												
London	14,618	22,002	26,682	44,853	26,779	23,311	20,168	25,725	32,263	38,369	44,617	319,387
Glasgow and Greenock	23,039	23,192	24,526	19,766	15,109	12,767	10,007	13,985	20,531	29,090	42,136	234,148
Cork and Queenstown	30,660	33,616	40,314	28,011	17,374	9,652	7,532	9,059	14,475	44,047	33,810	268,550
Plymouth and Dartmouth	3,614	3,527	5,136	7,664	8,104	12,206	15,855	15,389	15,854	10,346	11,213	108,908
Southampton	3,399	4,411	7,904	8,549	10,348	9,747	7,757	7,612	8,852	9,293	12,216	90,088
Londonderry	9,607	10,512	11,311	6,419	4,112	2,614	2,373	2,905	4,600	10,965	9,811	75,229
Other Ports	1,332	2,177	4,582	3,737	2,443	1,479	1,904	1,896	2,671	6,602	9,839	38,062
Total	86,269	99,437	120,455	118,999	84,269	71,776	64,996	76,571	99,246	148,712	163,642	1,134,372

The steamers vary in size, one of the largest of them, the "Romeo" (Wilson Line), carrying from 500 to 600 adults, and the "Capella" (Bremen Line) about 80 passengers. They do not come under the Passengers Act, but are subject to the Mercantile Shipping Act, and as a rule, do not carry a surgeon, but the Allen Company usually send one to take medical charge of the transmigrants from Iceland to Granton.

Wilson Line.

Some short time since the quality and amount of accommodation afforded by these vessels engaged the attention of the Board of Trade, when they instructed Captain Wilson, their chief emigration officer, to inform himself upon the subject and report accordingly. For this purpose he made two voyages in the Wilson boats, the first in the steamer "Angelo" from Christiana to Hull in September 1881, a slack period when few emigrants were on board; the second in the "Romeo" from Gottenburgh to Hull in May 1882, the busy season when the ship was crowded. Thus we have the advantage of Captain Wilson's observations in the continental traffic arrangements, as viewed under different conditions.

To summarise the statements in his report:—

In the "Angelo" the emigrants were berthed in two compartments. The after compartment was 47 feet long by 28 feet mean breadth. The sleeping accommodation consisted of two shelves 5 feet 8 inches wide on each side of the vessel running the entire length of the compartment, with no sub-divisions of any kind denoting the berthing-space of each emigrant. The lower shelf was 15 inches above the deck, the interval between the shelves 32 inches; and the upper shelf 42 inches from the deck overhead. The compartment was well ventilated and amply lighted by the hatchway (8 feet square) and by two cowl ventilators, one in the fore part and the other in the after extremity. The deck was of iron, and the ladders not lined at the back. The forward compartment was 60 feet long, and the fittings substantially the same as those above described, but the deck was of wood.

There was no attempt at the separation of the sexes, nor any curtains to screen the sleeping arrangements from the central portion of the deck.

The closet arrangements were bad, the closets being small, cramped, dark, and unprovided with water for flushing. Those for males and females close together, and the entrance to them in no way protected from the weather. Altogether (Captain Wilson states) "more evil-smelling, unsatisfactory places it is difficult to imagine."

The provisions and water supply were ample and of good quality.

Captain Wilson suggested that the iron decks should be sheathed with wood, and the deck ladders lined at the back; that the closets should be provided with a constant supply of running water, that those for men and women should be on opposite sides of the vessel, and that the women's closet should either be under the deck or entered from below; that the floors of closets should be cemented, with grooves cut in the cement for carrying off any wet, &c.; that the sexes should be sub-divided to the extent of separating the single men.

On the occasion of Captain Wilson's second trip in the "Romeo" he again inspected the "Angelo," when, it is satisfactory to report, he found the evils he had pointed out remedied, the owners having carried into effect the measures of improvement he had suggested to them.

With regard to the "Romeo;" the emigration season was at its height, the emigrants from Gottenburgh alone amounting to some 2,000 or so weekly, necessitating the putting on of extra boats. The decks of the "Romeo" were of wood; she contained three compartments for emigrants; they were well ventilated and duly lighted; two of them were

fitted up with sleeping berths in two tiers with movable partitions about 8 inches high separating the space allotted to each individual, the remaining compartment was set apart for single women. The sleeping-berths consisted of long shelves with no partition boards. The water-closet arrangements were satisfactory, the closets for men and women being on opposite sides of the ship. The vessel was crowded, but not more so than admissible by the Board of Trade regulations. Captain Wilson saw reason, however, to recommend an increase of space, viz., from 72 to 100 cubic feet, especially to passengers on the lower deck.

The supplementary boats were reported as unsatisfactory in respect of accommodation, but the owners at once adopted the measures Captain Wilson recommended, and expressed general desire to do what might conduce to the comfort of the emigrants.

Bremen Line.

I am indebted to the same source for the following information respecting the "Capella" and "Vega," two of the Bremen Line that run between Hamburgh and London, the passage occupying about 44 hours. The passengers by this line are mostly Germans. "In "the 'Capella' the emigrants are berthed in the alley-ways under "the bridge deck," and "in the 'Vega' in the foremost end of a "long poop, in the passage-way round the engine-room hatchway, "and houses, galley, and amidships in continuation thereof. "The "sleeping accommodation consists of two shelves 7 feet wide, the lower "about a foot from the deck, with an interval of 3 feet between the "shelves; there is just sufficient room to sit up on the shelves." "The "'Vega' can be fitted for 160 in the season, and has carried 220. "When more than 160 are on board, accommodation for the extra "numbers is provided on the same principle in the lower 'tween "decks."

The closet arrangements appear to be insufficient for the numbers of passengers carried. The "Vega" has only two closets, situated at the after end of the forecastle, and unsupplied with water. Captain Wilson considers the vessel should have at least six. The "Capella" has only one closet, and no water in it, for 80 passengers.

Currie Line.

Mr. Murray, principal officer of the Board of Trade at Leith, informs me that the passage from Hamburgh and Bremenhaven to Leith each occupies about 48 hours, and that from Copenhagen to Leith 72 hours. The accommodation allotted to emigrants between decks is ventilated by the hatchways and cowl ventilators, and lighted by bulls-eyes and the companion way; temporary berths are fitted up in a sufficiently comfortable manner. An attempt was made to separate the sexes, but it was found not to answer, the emigrants preferring to travel in families. Separate closet accommodation is provided for men and women.

Iceland steamers.

The Slimon steamer "Camoens" brings passengers from Iceland to Granton, the passage occupying usually about four days, but sometimes extending to 10 days when ice is encountered. The compartments are lighted and ventilated by hatchways, cowl ventilators, and a few side scuttles, which can be opened in moderate weather. A separate compartment is reserved for single men. The closet accommodation consists of five waterclosets. Sometimes these boats have from 700 to 800 transmigrants on board. They find their own provisions, but should the passage be protracted, I am informed that there is no fear of their being hard up for food, as there is always a good stock of ship's provisions to fall back upon.

With regard to the amount of accommodation afforded by the continental steamers, there can be no doubt that at times there is much crowding in them, an evil which probably is very difficult to guard

against considering the immense flow of emigration in the months of April, May, and June; but the fact of the passages being of short duration minimises the evil.

On the other hand, the inadequate amount of closet provision and the absence of water for flushing purposes, specially as regards the Bremen Line, indicates the want of closer supervision to insure these vessels being kept in a proper sanitary condition.

Transmigrants, debarkation of.

Upon arrival of the continental steamers at the port of London the transmigrants are met by the agents of the respective shipping companies, who conduct them to the lodging-houses, where they remain till the sailing of the ocean steamers.

At Hull, Leith, and Granton the arrangements are somewhat different, as the transmigrants do not re-embark from these ports.

Hull.

I did not myself visit the port of Hull, but I gather the following particulars from the reports of my colleague, Dr. Airy, and Messrs. Grey and Cowie, of the Board of Trade.

The departure of a steamer with transmigrants from the foreign port is telegraphed to Hull, together with the number of passengers she carries, to enable the agents to make arrangements for their conveyance by railway to Liverpool or other port, and to have refreshment ready for them to partake of before starting.

The steamers usually arrive on the Sunday, when some of the male passengers land and stroll about the town, but all sleep on board that night.

On the following morning the process of debarkation commences, and is carried out under considerable discomfort and much confusion; the landing of passengers and baggage, the discharge of cargo, and preparations for re-loading the vessel all going on at the same time, and no efficient accommodation provided for the shelter of the passengers.

The agents meet the transmigrants at the dock, sort their baggage, and conduct them to the lodging-houses, where a déjeûner is already prepared for them. They then proceed to the railway station whence they are despatched to Liverpool or other port; a special train being provided for them when their number reaches a hundred or so, otherwise they travel by the usual passenger train.

On arrival at their destination they are conducted by the agents of the company to their respective lodgings.

Leith and Granton.

The ports of Leith and Granton offer facilities for the disembarkation of transmigrants, possessing each a good pier with a railway station close at hand. On arrival of the vessels in the Frith of Forth the agents make arrangements with the railway companies for the conveyance of the transmigrants to Glasgow or Liverpool, as the case may be, the bulk of them remaining on board till the train is ready for them, when they are landed on the pier, and at once proceed on their journey.

British emigrants.

With regard to British emigrants, it is presumable that they would, as a rule, elect to sail from the port nearest their own homes, but this would in most cases necessitate arrival there the day prior to embarkation. Unlike transmigrants, however, their movements from the time they leave their homes to the date of sailing are quite of an independent character; I was, therefore, unable to obtain any information respecting them beyond the fact that the companies' agents are not instructed to commend them to any particular lodgings. Thus they are free to find their way to one or other of the various lodging-houses with which the ports abound, or if they chance to have friends in the neighbourhood they would probably stay with them pending the sailing of the ocean steamer.

App. A. No. 14.

On Emigration and Immigration, &c.; by Dr. Blaxall.

Lodging-House Accommodation and Infectious Hospital Provision at the several Ports of Embarkation.

Lodging-houses. (General observations).

It may be premised that, as a general rule, the principal shipping companies contract with certain lodging-house proprietors to board and lodge the transmigrants at the rate of 1*s.* 6*d.* per day for each statute adult. Thus the lodging-houses are to a certain extent under the control of the shipping companies who exercise supervision over them, and direct members of their staff to visit them frequently when in occupation, to insure the transmigrants being properly accommodated and well cared for.

Should the number exceed the amount of accommodation the lodging-house proprietor has at command he farms them out.

In our inspection of the lodging-houses we visited them under various circumstances, and at different times, both when full and the emigrants at their meals, when just vacated, and when for some days they had been unoccupied. Taking them altogether they were well ordered and in satisfactory condition, being clean, well ventilated, and light. When exceptions were found in these respects the same will be specially mentioned.

In all cases the provisions, consisting usually of soup, bread, meat, potatoes, and other vegetables, were of good quality, well cooked, and comfortably served up.

I propose now to take the ports seriatim:—

London. (Lodging-houses.)

(1.) London (*Lodging-Houses*). For health purposes the Metropolis is subdivided into various sanitary districts. The emigrant lodging-houses are mostly situated in the City, Whitechapel, and St. George's-in-the-East districts, and are under the jurisdiction of the respective sanitary authorities. The principal part of the emigrant lodging-house business is in the hands of two proprietors, with whom certain of the shipping companies are in direct relation. One has a large hotel in the Crescent, Minories, City, and the other a lodging-house on Tower Hill. Besides these, there are other lodging-houses which are let to transmigrants independently of the shipping companies. All, with one exception (Victoria House), are unregistered. At the time of my visit the hotel in America Square was full of transmigrants who were having their dinner, and everything appeared to be in good order. The house on Tower Hill was empty of lodgers. Here I observed a watercloset situated in the centre of the dwelling with no communication with the external air,—an unwholesome condition affording means of entrance of sewer air into the dwelling. A house in Mansell Street, under orders of the police to be registered, was full of Polish Jews, proverbial for their dirty habits, but independently of this the general condition of the house betokened a want of cleanliness and an absence of proper supervision. The walls of the rooms were dirty and there was an accumulation of flue under the beds, while the closets, situated in the yard, were in a neglected state and had no water for flushing purposes. The inspector of nuisances of the Whitechapel district accompanied me to several lodging-houses in crowded localities, but we found them closed. The inspector told me that proceedings had been threatened against the proprietors of these houses on account of bad drainage, unwholesome closets situated in the house, indecent occupation, and overcrowding. In one instance five adults were found sleeping in one room with a cubic capacity of 840 feet or 168 cubic feet per individual. The inspector of nuisances added, that the houses frequently changing hands militated against getting improvements effected.

With regard to Victoria House, above mentioned as registered, it is situated in Upper East Smithfield, near the docks, and contains 150 beds, so arranged as to secure privacy together with ventilation and light. It is provided with lavatories and good cooking arrangements, commensurate with the requirements of the establishment. The weak points observed were waste pipes in the washhouse and scullery in direct communication with the sewer, reliance being placed on double traps to prevent the escape of the foul air of the sewer into the dwelling. The waterclosets were situated on the basement and had no opening to the external air.

Infectious hospitals.

Infectious hospital provision is always ready at command, and cases of infectious disease occurring amongst transmigrants whilst staying at lodgings on shore are taken to one or another of the establishments.

In 1872, when an invasion of cholera was apprehended, the port sanitary authority provided a floating hospital, the "Rhin," which is anchored off Gravesend, and in more recent years has come to be used for cases of other infectious disease, including cases detected amongst emigrants on the point of embarkation.

Liverpool.

(2.) Liverpool. Taking the 11 years 1871–1881, as shown on table, page 148, the lowest number of emigrants embarked in one year was 54,975 in 1877, the highest number, 228,872, in 1881; thus showing the extensive and varying demand on lodging-houses at this port.

Lodging-houses.

The lodging-houses are duly registered and regulated by byelaws in accordance with the requirements of the Public Health Act, 1875, and are subject to efficient supervision under the sanitary authority, where, if overcrowding or other irregularity contravening the law be detected, proceedings are taken against the proprietors. Dr. Taylor, the medical officer of health, informs me that 300 cubic feet is given as the standard amount of cubic space to be allotted to each statute adult, but in new houses he is trying to get this increased to 350 or 400 cubic feet. The smallest of the houses visited had accommodation for 50 persons, the largest in occupation for 300, besides which an old hospital recently taken by one of the lodging-house proprietors has been fitted up for the reception of emigrants, and is capable of accommodating 500. Altogether the houses inspected were in a very satisfactory condition, but one or two matters of detail may be mentioned as calling for improvement. Thus, in one house the sleeping bunks were arranged in two tiers, one above the other, which Dr. Taylor, recognising as a bad plan, is endeavouring to get remedied. In a second house I observed an ill-ventilated watercloset, and on the premises of a third and fourth house a cesspit and a filthy privy. These are evils which may safely be left in the hands of the authority to rectify.

The infectious hospital provision consists of—

Infectious hospital.

(*a.*) The workhouse hospital. It is to this hospital that emigrants are by leave of the guardians mostly sent, the sanitary authority not possessing a hospital. The building is on a large scale to meet the requirements of the city, which are considerable, a large number of the working-class, earning only just sufficient for their daily wants. Thus, when overtaken by sickness they have no means of supporting themselves and apply to the parochial institution for assistance.

(*b.*) The Netherfield Hospital, established and partly maintained by voluntary contributions, the sanitary authority paying largely towards it. The accommodation consists of seven single-bedded rooms and ten wards with 80 beds.

(*c.*) An iron hospital, erected by the port sanitary authority in anticipation of a visitation of cholera; it occupies an open plot of ground at

New Ferry, on the Birkenhead side of the river, remote from dwellings and convenient for the water, enabling cases to be landed on its precincts. Happily, cholera has not appeared, but the hospital has been used in one instance, namely, when given up for the reception of cases of scarlatina occurring amongst the boys belonging to the training ship.

Plymouth. (Depôt.)

(3.) Plymouth. Emigrants from this port are chiefly sent out by the agents of the Australasian Governments, who have arrangements with the proprietor of a large depôt at Plymouth for their being received and lodged there pending embarkation. The site of the depôt has much to recommend it, standing on the west shore of Deadman's Bay, having the water of the harbour on the east and south side, the citadel on the west, and the Commercial Wharf on the north. There is a good yard for the emigrants to walk about in, overlooking the busy harbour. Tug steamers can come alongside to embark passengers for ships in the Sound.

The building consists of three separate blocks, A, B, C, substantially built, well ventilated, and lighted, and in every respect well adapted to this purpose. Block A contains on ground-floor, depôt master and Colonial agents offices, a surgery, and a large mess-room ($58 \times 41 \cdot 6''$) for single women. On the floor above, a dormitory ($73 \cdot 6'' \times 41 \cdot 6''$), fitted with washstands, &c., with accommodation for 248 single women, and a separate berth for the matron. Block B, ground-floor, depôt master's quarters and two large store-rooms for baggage, and over these a dormitory ($57 \cdot 6'' \times 41$), available for married couples or single men, as required. Block C communicates with block B by means of a covered way. On the ground-floor are situated the kitchen, provided with ample and excellent cooking apparatus, a large provision store-room, separate lavatories, with baths for men and women, and a disinfecting chamber heated by gas, in which I am informed a high temperature can be maintained. On the first floor are two large mess-rooms fitted with tables and forms. Second-floor dormitories for 100 married couples, and on the third-floor dormitories for 120 single men. At the end of this block, on the first and second floor, and cut off from the remainder of the building, are two wards well adapted for the reception of suspected cases of infectious disease.

The waterclosets are situated in the yard, and discharge into the harbour; thus the contents are removed by the tide. There is, however, a considerable surface of rock above high-water mark upon which excrement lodges and decomposes.* The drainage of the depôt runs direct to the harbour, and there is no communication with the town sewer. At the entrance to the depôt there is a lodge for the gatekeeper. Paper, pens, soap, and other articles which emigrants are likely to require are kept for their use, and supplied to them at a reasonable cost to prevent the necessity of their going into the town. The buildings throughout were well ordered and in a very satisfactory cleanly condition.

Infectious hospitals.

The urban sanitary authority possess an *infectious hospital*, situated in the workhouse grounds. It is a small building, insufficiently ven-

* *June* 1883. Whilst this Report is passing through the press, several cases of typhoid fever have occurred at the depôt amongst certain emigrants who had embarked in health, but returned after an absence of twenty-four days owing to the ship having become disabled at sea. The fever manifested itself within a day or two of their return, and was attributed to impure water on board the ship. Subsequently the disease spread at the depôt, and continued to prevail there more or less for some six or seven weeks; the channel of infection there was probably the privies which had become specifically infected by the evacuations of the first sufferers. August 6th. I am informed that the offending privies have now been removed, and self-cleansing trough-closets of approved pattern substituted.

tilated, crowded with beds, and altogether ill adapted to the purpose of a hospital.

In the spring of 1881, the port sanitary authority obtained from the Admiralty the loan of the "*Pique*," an old wooden sailing frigate, to be used as a *hospital*. She is now anchored in the Sound in charge of a man and his wife, whose duty it is also to attend upon the patients. I visited the "*Pique*" and found her lying in an exposed position, where, indeed, I have myself seen vessels driven on shore by force of the wind and sea. The ship is roomy and a fair height between decks, the sides of the cabins and sick bays are painted, and the deck overhead whitewashed. She had been thoroughly limewashed below and was generally clean throughout. The bilges were fairly free of water, and there was no perceptible smell from them till the water in them was disturbed, when it gave off offensive effluvia. The ventilation of the decks was effected by means of hatches, ports, and side scuttles, and that of the bilges by two canvas windsails. There is no provision for heating the air between decks, nor for the efficient disinfection of clothing, &c. The old cooking galley remains, and in addition there is a smaller one, affording together ample provision for culinary purposes, heating water for baths, &c. There is only one accommodation ladder, but the ship is fitted with a derrick by means of which the sick can be hoisted on board in a canvas cot prepared for the purpose. Some five or six cases of small-pox have been treated on board, but there is no separate accommodation set apart for such cases.

The use of the "*Pique*" as a hospital has much to commend it, being handy for seamen, and preventing the necessity of landing infectious cases and conveying them through the town. On the other hand, wooden ships are apt to retain infection and so endanger the health of persons brought on board. Again, the position of the ship is a serious objection, in view of the necessity that exists for the medical attendant at all times to find the ship easy of access, particularly when dangerous cases are under treatment. With regard to the use of a canvas cot for hoisting patients in, I would suggest the substitution of one made of non-absorbent material, such as thin strips of iron placed two or three inches apart, canvas being liable to retain infection; this applies also to the canvas windsails. Further, chloride of zinc should be freely and frequently applied to the bilges to insure their being kept in a wholesome condition.

Glasgow. (Lodging-houses.)

(4.) Glasgow. *The emigrant lodging-houses* at Glasgow are numerous. They are not considered in the light of common lodging-houses, but are registered under the head of "houses let in lodgings" (Public Health Act (Scotland), 1867, section 44), and are regulated by byelaws, which require 300 cubic feet of space to be allotted to every individual over eight years of age, and provide for the due cleansing and ventilation of the houses, and for notice being given to the authority on the appearance of any infectious disease. The houses are systematically inspected by officers belonging to the sanitary authority. The first that came under observation is used solely by Colonial emigrants, and is appropriated to married couples and single women, the accommodation for the former consisting of several moderate-sized rooms, and one large room fitted up in a manner to secure privacy, while the single women's quarters are in a separate part of the building. Single men are received into a separate house. The other lodging-houses visited were full of transmigrants, and were in a satisfactory condition, excepting some of the closets which are on the tub principle and required cleansing.

[A model common lodging-house for men, observed during the present inquiry, may here be mentioned as being unique, as far as my experience goes, in completeness of arrangement. It is provided with a large airy dining-hall, good reading-room, large kitchen fitted up with hot plate and the usual cooking utensils for the use of the inmates, so that each man may cook his own food, which can be purchased on the premises. There are also lavatories, baths, and a disinfecting chamber. The dormitories are so arranged that the sleeping-berths are quite private, being completely separated one from the other. The accommodation is 308 beds, allowing 400 cubic feet to each individual. The building throughout displayed admirable cleanliness and order.]

Infectious hospital.

Glasgow possesses a good infectious hospital, well situated in an open space within a convenient distance of the centre of the city; while in connexion with it, and situated in the town, is a useful adjunct in the way of a reception house, for families whose homes are visited with typhus. The sufferer is taken to hospital and the rest of the family removed to this house, there to remain under supervision till all likelihood of fresh cases of the disease appearing amongst them is over, when they are allowed to return to their own homes, which in the meanwhile have been thoroughly cleansed and disinfected.

Greenock. No demand for lodgings.

(5.) Greenock. Transmigrants do not lodge at Greenock, being merely brought here by small steamer or train to embark in the ocean steamers that anchor off this port.

Infectious hospital.

The Greenock urban authority have provided a hospital for the reception of cases of small-pox, the building occupying an open situation outside the town and removed from dwellings. Cases of other infectious disease are by arrangement received into the General Infirmary, and accommodated in wards provided for the purpose. This, I am informed, has sometimes resulted in the spread of infection to other parts of the establishment, but improvements have since been carried out to prevent the recurrence of the danger. Nevertheless, it is undesirable that infectious and non-infectious disorders should be treated in the same hospital.

Leith and Granton. No demand for lodgings.

(6.) Leith and Granton. At Leith and Granton there is no demand for emigrant lodging-houses, transmigrants on arrival at these ports being conveyed direct to Glasgow or other ports of embarkation.

Infectious hospital.

The urban authority of Leith possess an infectious hospital, but at the time of my visit it was in a very dilapidated condition and was unoccupied, arrangements having been made here, as at Greenock, for infectious cases to be taken to the General Infirmary, where accommodation is specially provided for their reception. There is also a second hospital situated at the end of the pier near the light-house, convenient for boats to come alongside, and capable of being made a good hospital for port purposes. It is a small building originally erected by the authority in apprehension of the importation of cholera. It has been used on one or two occasions for small-pox patients, but recently, I understand, has been appropriated to the purposes of a refreshment room.

Granton.

Granton does not possess an infectious disease hospital.

Queenstown. (Lodging-houses.)

(7.) Queenstown. The emigration returns (Table 5, page 148), for the 11 years 1871–81, show 40,314 passengers to have left Queenstown in 1873, declining to 28,011 in 1874, and 7,532 in 1877; then increasing to 44,047 in 1880, but falling to 33,810 in 1881, thus exhibiting considerable fluctuations, but on the whole representing large numbers and so exercising important influence upon the trade of the port. I am informed that in the busy season of the passenger traffic, the arrival

and departure of emigrants forms an exciting feature of interest in this watering place. The lodging-houses are numerically proportional to meet the demand made upon them at such times. Until recently, these houses were unregistered and altogether in a highly unsatisfactory condition. Overcrowding in them for one thing being excessive, as appears by the following extract from Mr. Gray's report to the Board of Trade, dated 20th October 1881, wherein he states: "On trustworthy "information, I have learned that four or five men are sometimes put "into one bed, while others lie about the floor; and that 26 people have "been known to lie in a room of about 17 feet × 10 feet, but emigrants "do not in the busy season occupy during the whole night even these "closely packed places. I was informed by a responsible person that "while some of the emigrants snatch an hour or two of rest others are "afforded facilities elsewhere for singing and dancing, so that the same "bed or floor place may be occupied by different persons during the "24 hours."

This statement is confirmed by Dr. Brodie, medical inspector of the Local Government Board of Ireland, in a communication to the Board dated 12th November 1881. Further, the privies belonging to the lodging-houses were represented as being of a very unwholesome type, consisting of cesspits favouring large accumulations, while in near relation to them were situated wells which supplied water for drinking purposes.

At this time typhus fever was prevailing in the town to a very serious extent, 20 cases with four deaths occurring from it in October 1881.

Drs. Downing and Townsend, the medical officers of health, in clear and forcible reports, brought under notice of the authority the presence of the disease, together with the existence of various sanitary evils, including those above noted, and recommended the adoption of certain measures well calculated to remedy the same. The result was that after prolonged correspondence upon the subject between the Local Government Board of Ireland and the authority, the registration of the lodging-houses was secured, and marked improvement effected in their general sanitary condition; byelaws also were adopted for their regulation. The houses are now under the vigilant supervision of an officer appointed by the authority. I visited them by night as well as by day; some were full of emigrants, others empty, while all presented a cleanly appearance, and those in occupation were well ordered, giving unmistakable evidence of efficient supervision. Certain of the evils, however, above referred to, as brought under notice by Dr. Brodie and others, were still in existence, to wit, untrapped drains in communication with unventilated sewers; a pan-closet situated in a bedroom, offering a direct channel for the escape of the foul air of the sewer into the room; cesspit-privies; and lastly a well exposed to the risk of excremental pollution. True, the people profess not to use the water of this well for drinking purposes, saying they have recourse instead to a tap some little distance off. But experience teaches that where water is close at hand it is liable to be used, regardless of the quality, rather than other water which has to be fetched from a distance.

Again, it appeared to me that the rooms in the lodging-houses were small for the number of persons allotted to them; and in order to satisfy myself on the point, I took the dimensions of one room which was registered for four adults, when I found the cubic capacity equalled only 840 feet, or 210 cubic feet per individual.

Subsequently at my interview with the chairman and other members of the authority, I took occasion to refer to the several evils that had

come under my observation, directing their attention to certain entries in the inspector of nuisances report book, which showed instances of overcrowding to have been reported, and no action taken in the matter. It then transpired that the medical officers of health had recommended 300 cubic feet, but the authority, unknown to them, had adopted 250 cubic feet as the standard. I endeavoured to impress upon the authority that 250 cubic feet was too low a standard, naming 300 as the minimum that should be allowed, and 350 or 400 as more conducive to health.

The chairman appeared to fully appreciate the importance of emigrants embarking in good health, and he promised measures of improvement. With regard to the water supply of the town, he said that that question was then under consideration of the Queenstown Authority, and they were in hopes of securing a new supply which they were in treaty for.

Infectious hospital.

Cases of infectious disease occurring in the town are taken to the General Infirmary, where they are accommodated in special wards; but cases of such sickness occurring afloat are sent to an infectious hospital recently provided by the Cork board of guardians in their capacity of port nuisance authority. This hospital is situated near the beach, remote from dwellings, and convenient for cases landed from ships. But the accommodation, consisting of one ward only, and one small convalescent room, is already found to be too limited; thus, on one occasion the ward being pre-occupied by a small-pox patient, a case of scarlatina could not be admitted, and was therefore relegated to the General Infirmary, where cases of sickness occurring amongst emigrants are also received.

I pointed out to the clerk to the authority the advisability of adding to the port hospital, so as to increase the amount of accommodation.

Ocean Steamships.

Embarkation of emigrants.

The emigrants are usually taken off to the ocean steamships in tugs, but in London they sometimes embark at the dock, and pass down the river to Gravesend, where the ship anchors for the night; or they are sent by train to Tilbury, where tugs are in waiting to convey them to the steamer. At Glasgow the embarkation sometimes takes place at the shipping wharf, but more generally the emigrants are conveyed by train or small steamer to Greenock, and then by tugs to the ocean ship.

Vessels boarded, and their destination.

We boarded and inspected ships at the ports of London, Liverpool, Plymouth, Greenock, and Queenstown, and thus had the opportunity of seeing representatives of the magnificent fleets possessed by many of the principal shipping companies. Certain of the vessels were about to start for various parts of the world, including Australasia, the Cape, United States, and British North America.

General description of the steamers.

These full-powered screw steamers are built of iron, and are from 2,000 to 5,000 tons burden. Amongst the fleets are to be found some of the finest steamships in the world, combining symmetry of form, lines that insure speed, strength of construction, good carrying capacity, and great steam power. The internal economy of several of the ships was in keeping with their external appearance, possessing clear, roomy upper deck, palatial saloon, well-appointed cabins for first-class passengers, mess-rooms for officers, well-ventilated compartments for emigrants, capacious galleys fitted up with every convenience and requisite for cooking purposes, large, light, and airy engine-room, various store-rooms for provisions, ice-house, &c. There are three decks in part appropriated to the use of the emigrants, viz., the weather

S . S. "SPAIN" AND "EGYPT."

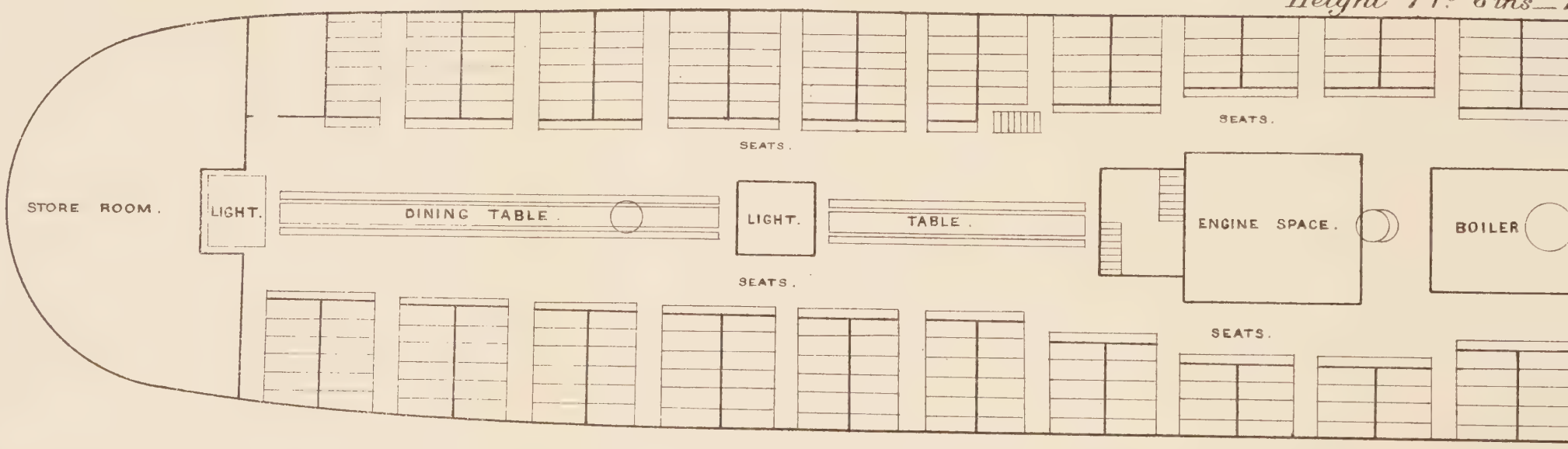
TONS	4512 .	TONS	4670 .
LENGTH FT	437 .	LENGTH FT	452 .
BREADTH	43 .	BREADTH	44 .
NOMINAL H.P.	600 .	NOMINAL H.P.	600 .

NATIONA

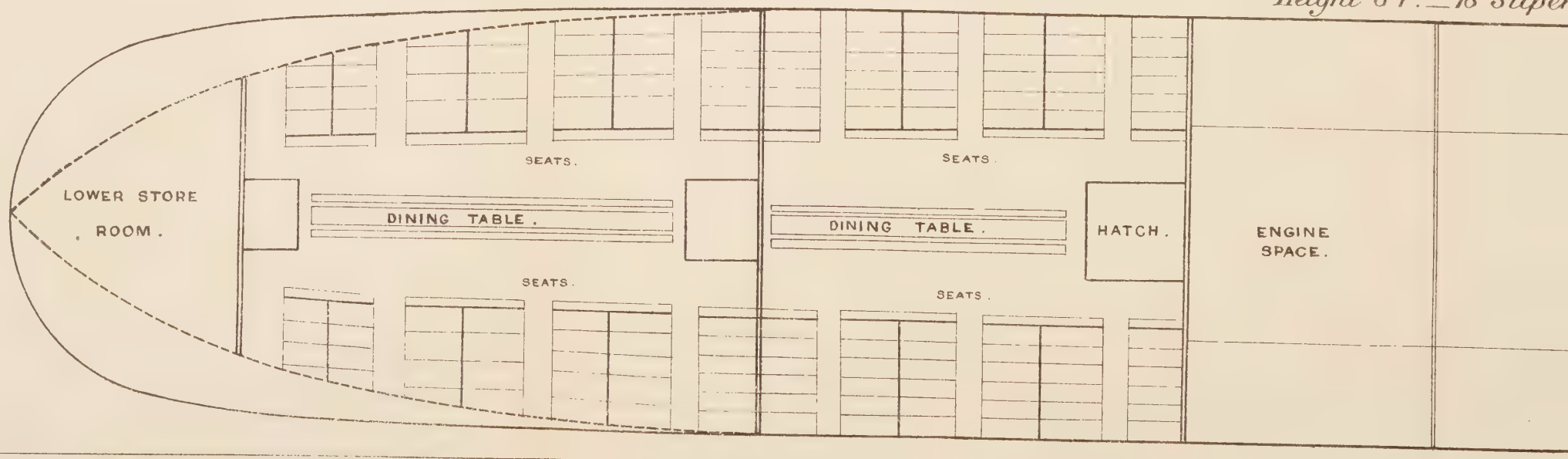
PLA

S

Height 7 ft 6 ins



Height 8 ft. 18 Super



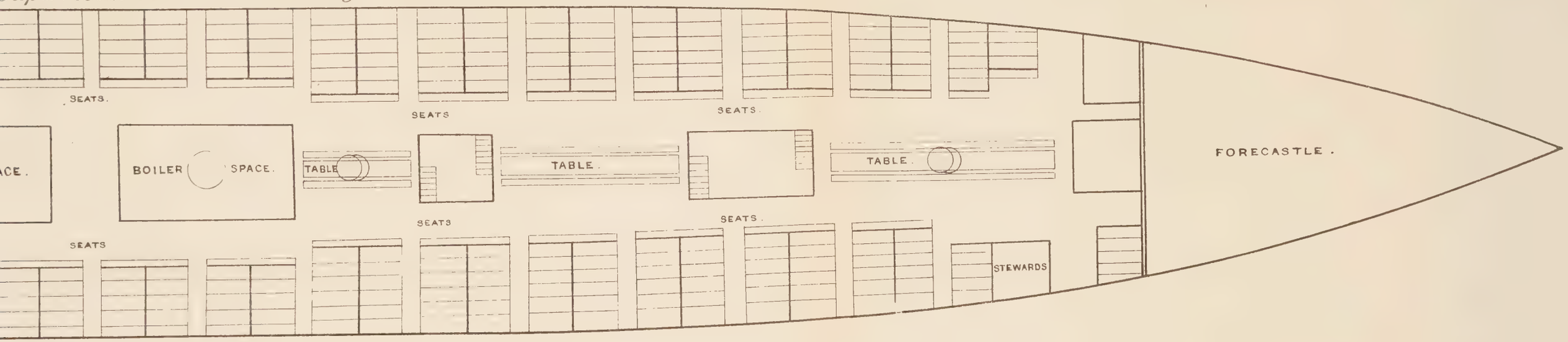
STEAM SHIP COMPANY LIMITED.

OF MAIN & LOWER DECKS,

S "SPAIN" & "EGYPT".

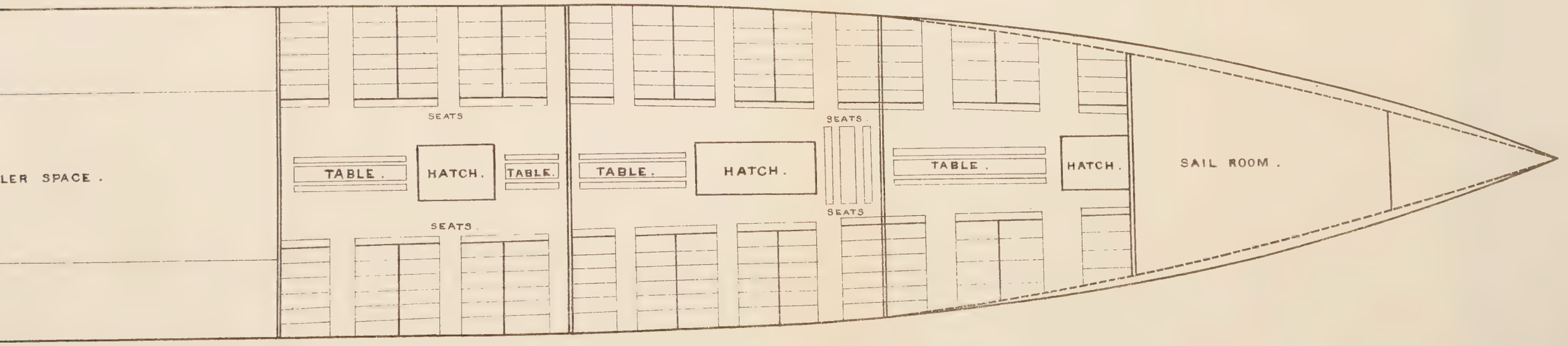
MAIN DECK.

Superficial feet for each Passenger. Berths 6 ft. by 2 ft.

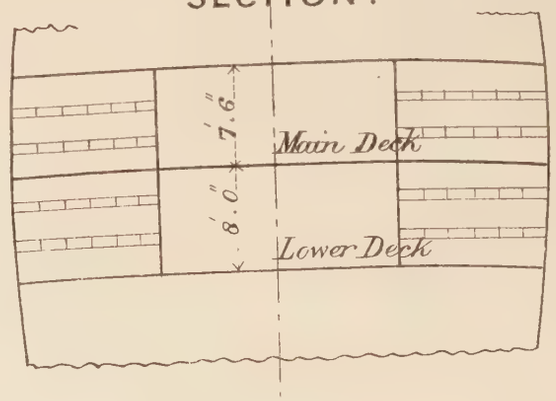


LOWER DECK.

cial feet for each Passenger. Berths 6 ft. by 2 ft.



SECTION.



Berths 6.0 by 2.0

DANGERFIELD LITH 22, BEDFORD ST COVENT GAR

deck for air and exercise, the upper and lower passenger decks, where they are berthed and take their meals, and below these again the hold, where the cargo is stowed.

Passenger decks.

The passenger decks, with which we are principally concerned, are lighted by the hatchways, which open to the weather deck, and by side scuttles; and at night by artificial light obtained from lamps of various kinds, or by electricity, being one of the latest improvements. For safety, the lamps are so arranged that while affording ample light to the surrounding deck, they are inaccessible to the passengers. The hatches and side scuttles, assisted by cowls and windsails, furnish the means of ventilation, together promoting the interchange of air by admitting fresh air to the deck and carrying off the foul air.

The keeping of the side scuttles open depends upon the state of the sea, which sometimes indeed is so high as to necessitate the battening down of the hatches to secure the safety of the ship, when the ventilation is mainly effected by cowls. Ventilation by fan has been tried, but found unsatisfactory in the Anchor Line, where the fan serves to supply fresh air; on the other hand, in the Monarch Line, the fan acts as an extractor of foul air and is used for cattle homewards, and doubtless would also be for emigrants if found requisite either from stress of weather or the large number of emigrants.

Compartment.

The Passengers Acts require only the single men to be separated from the remainder of the emigrants, but owners have in numerous instances provided separate compartments for the single women also. In some ships the compartments are separated by bulkheads, in others the saloon intervenes between the single men's compartment and the others. As a rule, each compartment has a hatchway opening to the weather deck; but in one or two instances the single women had to pass through the married people's quarters on their way to and from the weather deck.

Sleeping berths.

The compartments are fitted up with great care to secure the comfort of the occupants. The sleeping berths are variously constructed and arranged. A general plan is to have them in separate blocks of two tiers, one above the other, extending from the side towards the centre of the ship (*see* accompanying diagram), each block being divided into two spaces sub-divided respectively into four, five, or six berths, running fore and aft. The berths measure not less than 6 feet by 2 feet, and are separated from each other by a partition about 8 inches deep. Some of the berths are constructed of wood with shifting sides, a convenient arrangement admitting of enlargement of the berths if required for the accommodation of children. Others have canvas bottoms tightly strained, which commends itself to me as being more comfortable to sleep upon, and offering facilities for cleansing by boiling. Again, certain of the ships are provided with "Dewar's patent transformation steerage berths," which have the advantage of affording a comfortable bed at night, and in place of this a form and mess-table by day, combined with privacy. In one of the White Star ships we found the married people's berths arranged to secure almost as much privacy as cabins, by means of bulkheads with a space left top and bottom for ventilation purposes. I am informed that great care is taken to cleanse the fittings after each voyage, and that in the Australasian ships they are not infrequently destroyed on the disembarkation of the emigrants, in order to avoid encumbering the ship with them.

Bedding.

In the Atlantic trade it is not the practice of the shipowners to provide the emigrants with beds, and efforts are made, as far as possible, to induce the emigrants to treat as luggage any bedding they may bring with them from their homes, and in that way have such things put

below. But they are expected and encouraged to provide themselves instead with what are usually called emigrant beds; these consist of cotton material filled with oat-straw, and can usually be obtained at any port where emigrants embark for small sums varying from ninepence for a child to one shilling for an adult, superior quality one shilling and threepence. These beds are generally thrown overboard before arrival in America.

In the Colonial emigrant trade this practice does not prevail, and each Colony makes such regulations as it considers best for its own emigrants. The Cape Colony at the present time may be considered in the most advanced position in this respect, as the ship is required to provide mattresses, blankets, pillows, and bed linen.

Hospitals.

In the ships separate hospitals are provided for men and women. They are usually situated on the upper passenger deck (never below it), and are generally well lighted and ventilated. Each hospital was provided with beds ready for use. The ships were well found in medical comforts and requirements. Occasionally the key of the hospital was found to be in the hands of the steward, a circumstance which suggested the hospitals being put to other than their legitimate use, and which Captain Wilson, when doing duty at Queenstown, found to be the case in several instances, first-class passengers, ship's officers, stewards, and other members of the crew being accommodated in them in contravention of the Passengers Act (s. 24).

Some of the ships possessed hospitals for infectious cases situated on the weather deck, and although sometimes not well adapted to the purpose by reason of their position in the part of the deck frequented by the steerage passengers, and the want of efficient ventilation, still the provision of them in this open situation is a step in the right direction.

Accommodation for medical officers.

Here I would refer to the inferior accommodation we found provided for the surgeon, and which is not calculated to invite the services of desirable men, being altogether out of keeping with the responsible position the surgeon holds in the ship as entrusted with the care of the health of hundreds of men, women, and children. In some cases he has to stow himself away in the dispensary, surrounded by medicines and drugs, having no other place to sleep in. In other ships the cabin allotted to him is small, dark, and badly situated, thus in every way militating against his keeping any reasonable record of the cases of sickness that occur during the voyage. It is highly important that all such cases should be chronicled, especially with reference to infectious diseases; the want of such records has been experienced in the present inquiry, as will be presently shown.

Lavatories.

Most of the ships have separate lavatories for men and women, fitted with basins and washtubs, and provided with hot and cold water. These lavatories are not required by the Passengers Act; but they are essential to the comfort of the passengers and conducive to health. One or two of the ships had them for women only.

Closet accommodation.

The closet accommodation consisted of separate closets for men and women, quite apart, and usually on opposite sides of the deck. Some of the female closets were entered from the women's quarters below, and in one or two instances the closets and lavatories opened one into the other,—a bad arrangement for the women employed in the lavatories. The seats of the closets were arranged over a trough through which water is constantly flowing, when the ship is under weigh, by means of a pulsometer.

Iron decks.

I am informed that some ships have iron decks. I would observe that this is objectionable, as, unless sheathed with wood, the metal by

causing condensation promotes dampness, and the use of bottom boards, which is sometimes resorted to, has the disadvantage of harbouring dirt in the interstices.

Great care is bestowed upon the comfort of the emigrants, drinking water and barrels of biscuit being conveniently placed for persons to help themselves at will,—a privilege which many would probably avail themselves of when suffering from sea sickness and unable to take their meals ; and in some ships they can obtain tea or coffee when they like.

Care to secure the comfort of the emigrants.

The dietary is very liberal, the companies not restricting themselves to the scale provided by the Passengers Act, but in various ways exceeding this.

In most vessels matrons are in attendance in the women's quarters, and watchmen on duty day and night in other parts of the ship to check irregularity and preserve order.

The examination of these ships convinces me that the several companies to which they belong are without exception actuated by a laudable desire to promote the comfort and welfare of the passengers, and having myself, when serving in the Royal Navy, been employed for a while in troop ships, which are somewhat analogous to passenger ships, carrying soldiers with their wives and families, I am the better able to appreciate the measures adopted by them to this end.

Cattle ships.

Certain of the companies, including the Warren, Monarch, National, Beaver, and Lake Lines, are employed in the cattle trade, taking emigrants out to Canada and New York, and bringing large cargoes of cattle and sheep home to London and Liverpool.

The interior of such ships is constructed with a view of securing the entry of a large amount of fresh air on to the main and lower decks, cattle being specially intolerant of vitiated atmosphere and deprivation of oxygen.

We boarded one ship at Liverpool on arrival from Canada with 460 cattle and 1,300 sheep on board.

The decks where the cattle stood were some 2 or 3 feet deep in dung and litter, but the part of the ship free of live stock was quite clean. All the cattle and sheep were landed in fine condition, speaking well for the successful management on board, and were at once driven to the reception lairs provided on the Birkenhead side of the river on a very extensive scale and admirably kept. The cleansing and disinfecting the ship was then proceeded with under the supervision of officers appointed by the Privy Council.

Another of these ships (Lake Line Company) was on the point of sailing with some forty emigrants on board, and several horses for transportation to Canada. The emigrants were comfortably berthed and seemed well cared for, and although a short ship, *i.e.*, having less than 50 passengers on board, she carried a surgeon, which the representative of the company informed me was their usual practice.

The smell of cattle perceptibly pervaded the ship, and while it may be open to question whether such effluvia are really injurious to health, still, considering the emigrants are living together in confined spaces, exposed to the motion of the ship, which induces sea sickness, there can be no doubt that the smell of cattle would, to say the least of it, materially increase their discomfort, more particularly in bad weather, when the hatches being closed the smell would be intensified. In connexion with this subject it must be recognised that ships engaged in this twofold traffic are able to carry emigrants at a lower rate (the amount subject to frequent alteration) than the regular passenger ships, charging in August last 4*l.* 10*s.* against 6*l.*, and so meeting the circumstances of the poorer emigrants. It would, therefore, be unwise to impose such

restrictions upon the company as would preclude the continuance of the traffic at the reduced fares. At the same time the efficient cleansing of the ship cannot be lost sight of, and for this purpose it seems to me that a week at least should elapse between the discharge of cattle and the embarkation of emigrants. In the interval the side ports and scuttles should be left open, and thorough cleansing and disinfection of the ship carried out to the satisfaction of the port sanitary authority (Public Health Act, 1875, s. 91), instead of which I am told that at times these ships discharge their cargo of cattle and are "turned round" and despatched with emigrants in the short space of four or five days.

Manning the ships.

The manning of the ships is a subject that calls for observation. The Shipping Act for 1854, s. 122, requires that every local marine board shall establish a shipping office and appoint a shipping master and staff, whose duties shall include the affording facilities for engaging seamen by keeping registries of their names and characters (s. 124). The number of hands carried by ships is uncertain, as there is no crew scale legally compulsory. Owners do with as few men as they possibly can, but the emigration officer can refuse clearance if he considers the number insufficient for the safety of the emigrants (Passengers Act, 1855, s. 28).

The crew of a passenger steamer consists of captain and officers, seamen, firemen, and stewards. The seamen and firemen, with the exception of a few petty officers and leading men, are discharged to the shore directly a ship enters harbour on her return home, and before she sails again these vacancies have to be filled up. For this purpose the captain or his representative attends at the shipping office and engages for the voyage the required number of men, who sign articles of agreement, by which they bind themselves amongst other things to be on board on the day of sailing, and usually they are not required to appear on board before that time. This class of men are proverbially intemperate and irregular in their habits, and when the day comes for them to join, and the crew are mustered prior to sailing it not infrequently happens that some of the new hands will be in a semi-state of intoxication or suffering from dissipation, while some perhaps have not put in an appearance at all. Their places, however, must be supplied, in accordance with the requirements of the Passengers Act, to the satisfaction of the emigration officer. This is effected by picking up some of the loafers locally called "jumpers," who are always to be found hanging about seaport towns looking for a job. They are very unsettled in their habits and own to no regular work, but on occasions of this sort for consideration of a higher rate of wages than is usually given, they would start off to fulfil the purpose of a stop-gap. When a ship on her outward voyage has to call at another port she may be allowed to complete her crew there, as, for instance, an emigrant ship sailing from Liverpool may fill up at Queenstown, the Board of Trade officer stationed there being apprised by telegraph of the necessity for so doing.

The Cunard Line offers an exception to this system of manning, in that their crews are shipped the day before sailing and are subjected, together with the ship, to inspection by the owner, who repairs on board and after a searching inspection of the ship from stem to stern, and from upper deck to kelson, musters the crew and exercises them at fire-drill, manning boats, &c. Through the courtesy of Mr. McIver we had the opportunity of witnessing such inspection, and can testify as to the thoroughness with which it is conducted. This plan entails the expense of an extra day's wages to the men, but in return secures the ship's sailing in an efficient condition and ready to meet any emergency.

We are happy to be able to add that this practise has been adopted by some other well-known lines of steamers.

PART III.

Dealing with communicable Disease.

	Page
Precautionary measures :	
Practised by Colonial Government agents	163
„ shipping companies	164
Custom House inquiry	164
Public Health Act and byelaws as they apply to lodging-houses	165
Medical inspection of emigrants provided by shipping companies	165
Board of Trade medical inspection	166
Short ships	167
Bill of health	167
Disposal of cases rejected by Board of Trade medical inspectors	168
Precautionary measures on board ship	169
Vaccination of emigrants	169
Precautionary measures adopted by Colonial Governments	170
Ships' crews	171
Amount of infectious disease	172
„ „ at ports of debarkation	173
„ „ at railway stations	174
„ „ received into hospitals	174
Rejected by Board of Trade medical inspector	177
On board Transatlantic ships	177
Total amount	179
Amount amongst Colonial emigrants	179
Small-pox amongst ships' crews	180
Mortality in emigrant ships	181
Infectious sickness of former years	183

Precautionary Measures for the Prevention of the Introduction and Spread of dangerous Infectious Disease and Transmission thereof to other Countries.

General remarks.

Having followed the movements of emigrants and transmigrants throughout their course, from the date of their leaving home to their final embarkation at the various ports of the United Kingdom, inquiry is now specially concerned with the question as to how far the Public Health, Quarantine, and Passenger Acts are applicable to the requirements of the passenger traffic, in the sense of protecting public health against dangerous infectious disease, and as to what precautionary measures are adopted to prevent the spread of such disease, if it should appear.

In order to arrive at a just conclusion on this head, it will be necessary to review the particulars connected with the transit of the emigrants, in so far as they have any special bearing upon health.

To begin with intending emigrants:—

Precautionary measures. Colonial Governments.

The Colonial Governments, Canada excepted, before granting free or assisted passages to British emigrants, require, amongst other qualifications, that every applicant shall furnish a certificate to the effect that he is free from infectious disease, and has been vaccinated or had small-pox; a very wise provision, but one which loses its value in proportion to the length of time that elapses between the granting of the certificate and the final departure of the emigrant from home, seeing that in the meanwhile he may in various ways be exposed to infection and so contract disease.

Shipping companies.

The shipping companies, on the other hand, observe no such precaution, their agents, so far as I could learn, having no instructions to inquire into the health of intending emigrants (British or foreign) as regards freedom from infectious disease, &c.

The Scandinavians and Icelanders, I am informed, are required by their respective Governments to undergo medical examination before they embark on board the Continental steamers, which in the busy season are crowded with passengers.

Custom house inquiry.

On arrival at the British ports these vessels are boarded by the custom house officer, who, in accordance with the requirements of the Quarantine Act, makes inquiry of the captain as to the health of the ship agreeably to a prescribed form which the captain is required to sign, when, if the report be satisfactory, the passengers are allowed to land. Here I would submit that this sort of inquiry is not calculated to detect the presence of infectious disease, for the custom house officer is not acquainted with its nature, and the captain, with his multifarious duties to attend to, can hardly be expected, in a short passage of from 40 to 80 hours, to know much about the individual state of health of the hundreds of passengers on board, hence infectious sickness might be present in the ship without coming to his knowledge, when, he through ignorance giving a favourable report to the custom house officer, the infected person would be landed along with the other passengers, to the imminent risk of spreading disease on shore. For the sanitary authority are not concerned with the debarkation of transmigrants; thus it happens that a ship once passed by a custom house officer, the passengers are free to proceed on their way, going, if in London, direct to lodgings, but at Hull, Leith, and Granton, to the railway stations for conveyance to the various ports of embarkation, where they remain in lodgings till the time comes for them to start on their outward voyage.

Obviously, from first to last in the course of their transit, a certain amount of personal intercommunication must take place between the transmigrants themselves and others, either at the lodging-houses where, as at Hull, they stop for refreshment on their way from the steamer, or at the railway station, or it may be en route by train; their travelling or not with other passengers depending upon whether they have a special train allotted to them or not. In any case, the casual intermingling that necessarily takes place calls for mention as a ready means of spreading disease, should such chance to be present amongst the transmigrants or those with whom they come in contact.

Exposure to danger of infection in lodging houses.

In like manner as regards the lodging-houses at the various ports, their situation in thickly populated localities, together with the unrestricted intercourse which goes on between the transmigrants and the inhabitants of the place, offers free opportunity for the transmigrants, on the one hand, to introduce diseases into the town, or on the other hand, to contract infectious disorders from the townsfolk, the latter risk being considerable at times of epidemic prevalence, as, for example, at Queenstown where typhus fever was present prevailing throughout 1881, and continuing up to the time of my inquiry in September 1882. I am informed by Dr. Townsend that the first case appeared in January 1881, and from that date to the time of my visit the town was never free of the disease, fresh cases appearing every month varying from two in February 1881 to 21 in March 1882, in all 217 cases. The authority persistently neglected to carry out measures to prevent the spread of the disease, although urged to do so by the medical officers of health, Drs. Townsend and Downing, and by Dr. Brodie of the Local Government Board of Ireland. How seriously the health of the emigrants was jeopardised

Typhus fever at Queenstown.

may be gathered from the following abstracts of the correspondence that arose out of such neglect:—

On November 5th, 1881, Dr. Brodie reports; "An emigrant lodging-"house overcrowded, and cases of typhus fever removed *from this* "house to the hospital." He goes on to observe: "As the disease "has become endemic it is a matter of serious import to a thickly "populated locality, and great danger exists that germs of the disease "may be introduced into the emigrant ships, which would probably lead "the directors of the Transatlantic steamers to abandon Queenstown as "a port of call, and thereby entail an indescribable pecuniary loss on the "inhabitants." On December 28th, 1881, the Local Government Board of Ireland wrote to the authority to the effect that they would incur a serious responsibility if they continued to neglect to do their duty in this respect, and added that the Board proposed to send the correspondence to the Government with reference to the question of emigration from the port of Queenstown.

Subsequently to this the authority adopted the required measures, and at the time of my visit great improvement had been effected.

From the foregoing correspondence it will be recognised that the danger referred to was of a very grave character, threatening to involve the health and lives of passengers on board crowded ships, together with the risk of importation of the fatal disease into other countries.

Particular instances were not wanting where conditions favourable to the development and spread of typhoid fever were found to exist in the lodging houses at the several ports visited, such, for example, as untrapped drains in communication with unventilated sewers, foul cesspit privies, wells exposed to pollution through their situation in relation to privies, defective drains, or other contaminating circumstance; closets situated within the dwelling with no opening to the external air, and their soil pipes unventilated.

Medical inspection as provided by shipping companies.

Some of the shipping companies do not concern themselves at all as to the health of the transmigrants at the lodgings; others employ the surgeons of their ships or local practitioners to examine them during their stay there, and in this way cases of communicable disease have from time to time been detected and sent to hospital, and disinfection of the infected house carried out under the supervision of the sanitary authority. But as a rule these inspections are not of the frequent and systematic character essential to insure early detection of premonitory symptoms of infectious disorder; and in the event of indeterminate cases of sickness being detected, there are no rooms set apart in the lodgings where such cases can be isolated for observation purposes; hence they are suffered to remain a possible danger to their fellow lodgers and others with whom they come in contact before the disease declares itself.

Public Health Act and bye-laws.

True, the Public Health Act and the byelaws require that every lodging-house keeper shall give immediate information upon the appearance of any infectious disease in his house, and the law further imposes penalties for the wilful exposure of infected persons or things, rendering it incumbent upon the local authority to take action in such cases; but it is obvious that these provisions are not adapted to meet the exigencies of the passenger traffic, for although the lodging-houses are, save in the Metropolis, under the careful supervision of local authorities, these have no power to deal with cases of mere suspicion, hence it follows that when the law is called into operation it is often not until considerable opportunity of effecting mischief has been afforded through the unrestricted intermingling of infected and healthy emigrants at crowded lodging-houses.

Further, it is in evidence that the lodging-house keepers not infrequently neglect to inform the sanitary authority of the presence of infectious disease in their houses.

Board of Trade medical inspection.

Prior to embarkation the emigrants are subjected to medical inspection by officers appointed by the Board of Trade. At Liverpool and Queenstown these officers hold permanent appointments on a fixed salary, but at other ports they are paid by fee in accordance with the provisions of the Passengers Act, s. 44. The inspection of the emigrants usually takes place as they pass on board the tug, but London, Plymouth, and Queenstown offer exceptions to this.

The following may be taken as a fair illustration of the scene enacted on board an emigrant ship on the point of sailing. First, the ship is inspected by the emigration officer and medical inspector to see that the requirements of the Passengers Acts are fulfilled. The crew are mustered and inspected as to health, boats are manned and manœuvred, to see that the men know their stations and that the gear is in good working order. Soon the tug comes alongside with the emigrants, the medical inspector, emigration officer, and certain officers of the ship being ready to receive them. Men, women, and children may be seen pouring in,—a mixed multitude of many nationalities, talking divers languages, and creating a very babel of tongues,—inquiring some for their goods and chattels, others for missing members of their families. Parents and children, husbands and wives, getting separated in the crowd, and all clamouring alike for attention at the hands of the officials. As they pass on board the emigration officer receives from them the counterpart of their contract ticket, asking their names, and checking them off one by one according to a prepared list which he holds in his hand, bidding detached portions of families to stand aside till the rest of them can be got together; in this way they pass on to the medical inspector, and from him to the officials of the ship, who direct them to their respective quarters, the heterogeneous mass gradually shaping itself into order. Soon a man is stopped, his blotchy face and blood-shot eyes carrying with him suspicion of infectious disorder; on closer scrutiny, however, this is found to be due to continued intemperance increased by a heavy bout of drinking the previous night, and he is allowed to pass on. Again, in another instance, the same symptoms are accompanied by a quick pulse, high temperature. and other indications of acute disease, and the individual is rejected and directed to stand aside, when the passing-by is resumed. Presently a family of five or six healthy looking children come trooping forward; the medical inspector inquires as to their vaccination, examines the arms of two or three of them, and finds by chance no signs of the operation, when he directs the attention of the ship's surgeon to the fact. The next family is stopped as some of the children manifest symptoms which may be those of measles or scarlatina; these are accordingly referred back to await opportunity for closer examination, when should suspicion be confirmed, they are rejected, which involves detention of the whole family to prevent the separation of parents and children. In some cases circumstances compel the medical inspector to have the children undressed then and there for examination, and so the inspection proceeds until all have undergone the ordeal. The emigration officer and medical inspector complete their duty by comparing the counterfoils with the passengers lists, signing various papers certifying that the nominal list of crew and passengers is correct and the requirements of the Acts and regulations fulfilled. The scene is full of life and interest, affording abundant opportunity for the study of human nature under a variety of phases. There, may be seen the

careless and thoughtless starting forth with a jaunty air as if on holiday bent; near them the earnest, thoughtful characters, feeling the responsibility of commencing life afresh; some, evidently full of high hopes for the future, others bearing signs of doubts and fears; others, again, full of grief at leaving their old homes and the country of their birth; this, however, is merely the natural pang at the severance of old ties, for they have had the bold heart and the high resolve to plan and carry out the project, and are not likely now to repent the step. Withal it is a goodly assemblage of sturdy, intelligent, self-reliant characters, such as any nation might be glad to welcome as an addition to its strength and wealth.

With regard to the character of the inspection, the medical officers are careful and painstaking; but the noise, bustle, and confusion on board must materially militate against the efficient performance of the duty. I witnessed the proceedings under favourable circumstances, in so far that the weather on each occasion was fine; had it been otherwise, and rain, wind, or snow added to the other difficulties, it would seem well-nigh impossible that the duty of inspection could have been carried out with anything like efficiency. Occasionally, in exceptionally bad weather, the emigrants are inspected between decks, but here the light is bad for the purpose.

In London, on occasions when the emigrants embark at the dock and pass down the river to Gravesend sleeping on board that night, they are not mustered for inspection until the following morning, obviously after free opportunity has been given of spreading infection in the ship, and thus nullifying to a great extent the object of these inspections.

At Plymouth the inspection takes place at the depôt, which offers exceptional advantages in the way of shelter, good light, and ample accommodation, with freedom from bustle and confusion.

At Queenstown the emigrants are inspected on the wharves, which is open to great objection, taking place in the open air, and obliging the medical inspector to make in public such examination of children and others as he may deem necessary.

Here the medical inspector is called upon to fulfil the additional office of assistant emigration officer. Accordingly having completed the medical examination of the emigrants on shore he repairs on board, when, should the steamer have left Liverpool short of crew with orders to complete at Queenstown, it devolves upon him to see this carried into effect; or should her machinery have broken down in her passage from Liverpool he has to report to the emigration officer who exercises his own judgment as to the desirability of detaining the vessel till the defects shall be made good.

Altogether the duties imposed upon him at this port are important, for the condition in which the ship is found after her run from Liverpool may probably be taken as an index to what she will be for the rest of the voyage; and, as already mentioned, Captain Wilson, when employed at this port, found many instances of misappropriation of the hospitals, which could scarcely have been the case when the ships cleared from Liverpool.

Ships carrying less than 50 passengers are styled "short ships," and are not required to carry a surgeon unless the total number of persons on board exceeds ninety-nine; nor are the emigrants subjected to medical inspection by the Board of Trade inspector. Short ships.

It may be mentioned that the captains of ships going to foreign ports are required to provide themselves with a "bill of health" duly attested, usually signed by the custom house officer, certifying that the Bill of health.

ports sailed from are free from cholera or other dangerous infectious disease.

The fact of these documents being signed by an officer of the customs, who is not in communication with the health officers, appears to me to detract from their value.

At Queenstown the "bill of health" is signed by the assistant emigration officer, who informs me he knows nothing about the health of the port, and has no opportunity of gaining such information. As already said, he is a medical practitioner and knows the occasion that exists for knowledge on this subject.

Disposal of rejected cases.

With regard to the *disposal of cases rejected by the Board of Trade medical inspector*. While the Passengers Act, s. 45, directs that the emigration officer shall order the *re-landing* of any person on board any passenger ship who is by reason of sickness unfit to proceed, or likely to endanger the health or safety of other persons on board, it makes no provision for the mode in which such re-landing shall be carried out, so as to secure to the people on shore similar protection to that afforded to those on board by the removal of the sick from the ship; as a consequence, the landing of such persons has resulted in spreading disease

At Gravesend.

amongst the local communities where it has taken place, giving rise to well-founded complaints; as, for example, at Gravesend in 1878, when the urban sanitary authority, having represented to the Local Government Board that disease was spread in their district through the landing of infected emigrants, Mr. Netten Radcliffe, the assistant medical officer, was instructed to institute inquiry into the circumstances of the case After careful investigation he satisfied himself as to the justice of the complaint, and much correspondence ensued upon the subject between the Local Government Board and Board of Trade, also the Local Government Board and the sanitary authorities concerned (port sanitary authority of London and urban sanitary authority of Gravesend), with the result that an understanding was arrived at that in future all such cases should be sent direct from the emigrant ship to the hospital ship "Rhin," anchored off Gravesend, the Board of Trade agreeing to regard this in the light of re-landing.

At Glasgow.

Again, at Glasgow in 1881, Dr. Russell, the medical officer of health, reported to the board of supervision of Scotland that two cases of small-pox had been re-landed from an emigrant ship at Greenock, and sent to a lodging-house at Glasgow, where they passed the night in the same room with eight other emigrants; also, that cases of measles had been re-landed in a similar way and received into crowded lodging-houses. This report led to new and satisfactory arrangements being entered into between the Board of Trade officers, sanitary authority, and the shipping companies, by which all infectious cases re-landed from emigrant ships were to be taken to the infectious disease hospital, and notice thereof sent to the medical officer of health.

Liverpool.

On examining the Board of Trade returns of rejected cases for 1881–1882 I observed that eight cases of small-pox were rejected and re-landed at Liverpool, and that two only are accounted for as received into the hospitals; the remaining six may have been sent to the West Derby Hospital, where I am told small-pox cases are taken, but I could get no satisfactory information respecting them. Dr. Spooner mentions two or three instances in which children rejected by him for measles and re-landed presented themselves a week afterwards for embarkation, when he ascertained that in the interim they had been staying at lodgings.

While at Liverpool I myself witnessed the rejection of some cases of measles by the Board of Trade inspector, and upon making inquiry as

to the usual method of disposing of cases so re-landed, I was told that it was not customary to apprise the medical officer of health of the circumstance, and that it was doubtful what was done with them, whether sent to hospital, lodgings, or private houses. This re-landing has led to correspondence between the urban authority and the directors of the shipping companies, the authority pointing out that those in charge of the emigrants rendered themselves liable to penalties if they permitted the exposure of infected persons; but evidently, by my recent experience in the cases of measles above quoted, the correspondence resulted in no practical good. After consultation with Captain Wilson we advised that the medical inspectors of the Board of Trade should send immediate information of rejected cases to the medical officer of health, and that to facilitate his doing this, the sanitary authority should have printed forms prepared for the medical inspector to fill up and despatch to the medical officer at once, in order to enable him to take the necessary steps to insure the safe disposal of the cases. This re-landing is often complicated through the necessity of including therein whole families, when perhaps only one or two members are suffering. All, however, are sent to hospital together, which, besides causing much inconvenience to the establishment, involves the risk of the healthy ones there contracting disease. It is in evidence that disease has from time to time been thus spread to persons at Liverpool. At Glasgow this difficulty is met by sending the healthy members of the family into the reception house, already mentioned in connexion with hospital provision (page 156). The same with regard to suspicious cases, which it is clearly the duty of the medical inspectors to reject. These, according to present arrangement, are taken to an infectious hospital, thereby exposing such persons to terrible danger, supposing the suspicions should not be confirmed.

With regard to precautionary measures on board ship :—

Precautionary measures on board ship.

The Transatlantic steamers carry two medical officers as a rule where the passengers number 1,000 or upwards. The surgeon of the ship is in attendance at the Board of Trade medical inspections, and thus all the passengers pass under his observation, his attention being directed to any child whom the inspector may observe to be unvaccinated, and to any other points that may attract special notice. During the voyage it would seem that no daily systematic inspection is made by the surgeon with a view of detecting premonitory symptoms of infectious disorder. Such a precautionary measure would be of great value where large numbers of men, women, and children are congregated together on board ship, for it would enable immediate isolation to be carried out, instead of waiting until the case is developed and the sufferer so ill that the doctor is sent for. But in order to reap the full benefit of this measure it is important that means of isolation should be ready at command, which is seldom the case on board these ships, as hospitals for infectious cases are quite the exception. Another subject of regret is that the surgeons are not in the habit of keeping precise records of the cases that come under treatment, noting the dates of attacks, nature of disease, &c. Such information would prove very valuable, for it would enable the disease to be traced to its origin, and so placing it in the power of the shipping companies to take steps to prevent a recurrence of the danger, supposing it to be referable to infection at lodging-houses or other places over which they could exercise control.

With regard to precautionary measures against small-pox :—

Vaccination emigrants.

The Transatlantic shipping companies are very loyal in their endeavours to comply with the wishes of the National Board of Health of

the United States on this subject, causing notices in different languages to be posted up in the lodging-houses and in the ships, warning passengers that unless provided with a certificate of vaccination they are liable, on arrival at the port of destination, to be placed in quarantine until vaccinated; adding, that the surgeon of the ship is prepared to give certificates to such persons as can show satisfactory signs of the operation, or, on the other hand, to vaccinate any persons who may require it.

I should state that I found the ships well provided with lymph, although certain of the directors informed me they had some difficulty in obtaining it.

No evidence is forthcoming as to the number of unvaccinated persons found amongst British and foreign emigrants, but from the manner in which the Vaccination Acts are carried out in the United Kingdom, the presumption is that few British subjects, at all events children, would be in this category.

Precautionary measures adopted by Colonial Governments.

The Colonial Governments evince a practical interest in the health and welfare of the emigrants whom they send out, and are specially careful to secure their vaccination. Each Colonial Government appoints a surgeon superintendent to take charge of the emigrants on board their chartered ships, issuing for his guidance instructions of an explicit and exhaustive character, requiring him to see that the provisions issued are in accordance with the specified scale, that the emigrants' quarters, bedding, &c. are kept in a cleanly, wholesome condition, and personal cleanliness observed amongst the emigrants. His instructions extend also to the maintenance of order and discipline, including the daily attendance of children at school. In short, it appears to me that nothing has been lost sight of that could tend to promote the comfort and well-being of the emigrants.

The Queensland Government requires the surgeon to examine the emigrants when they arrive on board as to their vaccination, and to vaccinate all doubtful cases.

South Australia and New South Wales provide for the medical examination of the emigrants prior to embarkation, requiring from the surgeon of the ship a certificate to the effect that he has fulfilled the duty carefully, and having rejected the sickly and unhealthy, the remaining emigrants are free from infectious diseases and have been vaccinated, re-vaccinated, or had small-pox, as the case may be.

The instructions require also that the surgeon shall keep a watchful eye over the emigrants during the voyage, so as to detect the first signs of infectious disease amongst them, and adopt timely measures to prevent its spread; South Australia citing the following instructive particulars of the measures successfully adopted by the surgeon of an emigrant ship to prevent the spread of small-pox on board:—

Extract of Report by Mr. Arthur Goullet, Surgeon-Superintendent of the "Spitfire" (1863), on the appearance of Small-pox in that Vessel.

"Two days after sailing, a boy, aged 9 years, was attacked with small-pox. He had been vaccinated by me previously to sailing, but the disease was then in a state of incubation, and had been brought from Leeds. He was immediately placed in the male hospital, with his father to attend upon him. The windows were barred with iron, to prevent things being passed out, and the door kept locked, the key being in my possession. No communication was allowed either with his friends or any other of the emigrants. The proper food and medicines were passed in, but nothing was allowed to be passed out, and dirty linen was thrown overboard. No person was allowed near the door or windows of the hospital, and the chinks in the bulkhead separating it from the female hospital were carefully caulked. Every possible means of

ventilation and disinfection were unremittingly used, and I was the only person who had any communication with the patient and his father, and I used every precaution so as not to carry the contagion to others. The father was allowed air and exercise on the lee side of the poop at night, after all the other emigrants were sent below; and when the boy was convalescent, and desquamation had commenced, frequent baths in casks of warm fresh water were used, and after every bath fresh bedding and clothing made of blankets were supplied, and the old ones thrown overboard. The boy was not allowed to leave the hospital until desquamation had entirely ceased. He is much pitted. By these means the disease was happily prevented from spreading, although there were many unprotected people on board, for the vaccine lymph supplied me was ineffectual in twenty-four cases out of twenty-five."

With regard to ships' crews :—

Re-vaccination of ships' crews.

While the Transatlantic shipping companies are careful to adopt measures to secure the vaccination of emigrants, they, strange to say, neglect the same wise precaution in respect of their officers and crews, thereby leaving open a very likely channel for the conveyance of small-pox on board at the risk of its spreading in the ship and being carried to other countries, besides exposing their crews, whose services can ill be dispensed with, to the great danger of contracting the disease, more particularly in view of their being liable to be employed in attendance on infected passengers.

I attended a meeting of the directors of the various Transatlantic shipping companies at Liverpool, when I took occasion to refer to the number of cases of small-pox that had occurred amongst their crews, impressing upon them the great value of re-vaccination, and strongly advising that it should be carried out in regard to all employed on board their ships.

They concurred in the desirability of this step, but at the same time certain of them seemed to apprehend great and almost insurmountable difficulties in carrying it into effect, owing mainly to the system of manning the ships, the crews not being got together till on the point of sailing. I pointed out that if re-vaccination were made a sine quâ non of service, and carried out on board, no serious opposition need be apprehended from the stewards and standing part of the crew, while with regard to the irregular men, these would be done as they shipped, so that in the course of time they, too, would all be re-vaccinated, and the companies thus reap the advantage of having protected crews,—an issue so important that I had no hesitation in saying it would be to their interest to adopt this desirable step.

Of the other shipping companies, so far as I could ascertain, the Union alone require their officers and crews to be re-vaccinated, their instructions being very precise on the point directing that the surgeons in the company's employ shall satisfy themselves that all have been re-vaccinated within the last seven years; and shall certify the same in writing, naming any instances in which objections have been raised to conform to this regulation. Another proviso of the Union Company is that "the surgeon is invariably to be present when the crew sign articles, and in the event of any of them appearing sickly, he is to inspect them before allowing them to sign."

The charter-parties of South Australia and New South Wales require that the officers and crew shall be passed by a competent medical officer. New South Wales further requires that the certificate as to their being in good health shall, amongst other things, specify that they are free from every disease that is usually considered contagious or infectious; but with all this forethought no mention of vaccination or re-vaccination is made in the charter-parties. I observe, however, appended to the "Instructions to Surgeons," issued by the South Australian Govern-

ment, a letter dated from the Central Vaccine Office, South Australia, June 7th, 1877, advising that re-vaccination should be resorted to in the case of emigrants and members of the crew who do not show three or four good vaccination marks, or who have not been re-vaccinated within seven years.

Summary of precautionary measures.

It will be seen by the foregoing detailed particulars of the manner in which the emigration from the United Kingdom is carried out that—

(1.) No efficient precautionary measures are adopted to prevent the introduction of infectious disease into the United Kingdom by "transmigrants."

(2.) With the exception of the medical certificate required by certain Colonial Governments from intending emigrants on applying for their passage, and the provision made by certain of the shipping companies for the medical examination of transmigrants at the lodging-houses, no precautionary measures are adopted to prevent the spread of epidemic disease by emigrants at the various stages of their course, nor to protect them against the risk of contracting disease at the ports of final embarkation.

(3.) That the Board of Trade medical inspection of emigrants on embarkation, to provide against the introduction of infectious disease into the ships, is conducted under difficulties, such as exposure to weather, &c., that militate against its efficiency.

(4.) That there is a want of due precautionary measures on board ship to guard against the spread of disease.

Inquiry as to the amount of infectious sickness.

It now remains for me to report to what extent infectious disease has prevailed amongst emigrants, and where contracted; for information on this subject I applied to the medical officers of health, the Board of Trade medical inspectors, the shipping companies, and the Colonial agents for returns and particulars of infectious sickness that had come under their cognizance, enclosing with my application to the shipping companies and Colonial agents, forms with special columns for the entry of "date of attack," "nature of disease," &c., &c., with a request that they would kindly fill them up and return them to me.

The medical officers of health supplied me with the required information, as did also the medical inspectors at Liverpool and Queenstown, but the medical inspectors for London and Glasgow could not do so, as they had kept no record of rejected cases. The chief emigration officer at Glasgow was enabled to furnish me with the particulars of cases rejected at that port.

With the shipping companies, I regret to say, my object was entirely frustrated owing to their medical officers, as already mentioned, having kept no record of the particulars of the cases which had come under treatment on board. This to me was a matter of surprise, having been accustomed, when serving afloat myself, to see all such particulars accurately chronicled in a daily sick list. One or two of the companies sent me lists showing so many cases of specified disease as occurring on the voyage, while one or two placed their medical logs at my service, but no where could I obtain data to enable me to form an opinion as to where the cases were contracted, whether at the lodgings or previously, or whether the symptoms of the disease were manifest at the time of embarkation and had escaped the notice of the Board of Trade inspector.

It is the custom of the Board of Trade at Liverpool to require the surgeons of emigrant ships when they return from a voyage to report in writing the amount of sickness they have had on board, which reports for the years 1881 and 1882, being still at the office of that Board, I was able to examine.

From the information gathered from the various sources I propose to consider—

(1.) The amount of sickness observed amongst transmigrants:
  (*a.*) At the ports of debarkation;
  (*b.*) At the railway stations;
(2.) The number of cases of infectious disease occurring amongst emigrants (British and foreign), and received into certain hospitals;
(3.) The number of cases rejected by the Board of Trade medical inspector;
(4.) The number of cases occurring on board the ocean steamers;
(5.) Cases of small-pox amongst ships' crews.

Amount of infectious sickness at various stages of the emigrants route.

Infectious Sickness.

(1.) Transmigrants:

(*a.*) *At ports of debarkation.*

Hull (three cases of measles).

Dr. Airy reports the detection of three cases of measles amongst transmigrants at Hull. The first made known to the customs house officer on arrival in the port, and by him reported to the sanitary authority on the 12th September 1881. The second case detected by the emigration agent at the railway station on 26th September 1881, both cases being taken to the hospital. The third case was stated by one of the emigration agents to have been found and treated privately without being brought to the knowledge of the sanitary authority.

This fact, Dr. Airy observes, affords evidence of a certain amount of risk to the public health, which might become considerable if infectious diseases were prevalent in the countries whence the emigrants are drawn.

Leith (13 cases of measles).

On 24th August 1882 the "Camoens" steamer arrived in the Firth of Forth from Iceland after a ten days' passage, having been delayed by ice, and anchored off Granton, in the jurisdiction of the Cramond rural sanitary authority. On the previous day the agent received a telegram from Thursoe informing him that measles had broken out in the vessel. He at once applied to the custom house officer, who sent word to Dr. Smith, medical officer of health of the Cramond rural sanitary authority. This officer had not been long appointed and was quite ignorant of the course to be pursued; accordingly on receipt of the intelligence he went to Leith to endeavour to get advice. The following morning at *three o'clock* he was on the pier in readiness to board the vessel directly she arrived, which, however, was not till eight or nine a.m. She had 47 cabin passengers and 107 transmigrants on board. The medical officer, whom the Allan Company had put on board to take charge of the emigrants, reported 11 cases of measles. The Cramond authority does not possess an infectious hospital, and Dr. Smith, still being at a loss what to do with the cases, went to Edinburgh to consult Dr. Littlejohn, who unfortunately was out of town; he then went to Leith and saw the sanitary inspector, and afterwards called on the chairman of the sanitary authority, but he also was out. Thus baffled on all sides in his endeavours to get advice, he sent the inspector off to the Infectious Hospital at Edinburgh, and ultimately got the 11 children received there with their respective families, in all 44 individuals, the children being conveyed from the landing-place in cabs, the rest walking. All were lodged in the hospital for the night; the next morning the healthy ones were sent to lodgings, where subsequently two other of the children were attacked, making a total of *thirteen* cases.

The remainder of the "transmigrants" landed from the "Camoens" were sent to Glasgow and are reported to have been forwarded to Canada in a compartment by themselves, but with what result I was unable to learn.

Railway station at Liverpool (three cases of scarlatina, nine cases of measles).

(*b.*) *At the railway station.*

On the 21st February 1882, upon the arrival of transmigrants from Hull at the railway station, Liverpool, three cases of scarlatina were detected by the emigrant agent and sent direct to the infectious hospital. On April the 26th and 27th and on June 8th, two, five, and two cases of measles respectively were similarly detected and sent to hospital, making a total of 12 cases of infectious disease thus removed.

Cases received into infectious hospitals.

(2.) *Infectious cases received into hospital.*

(*a.*) *Liverpool Hospital.*

Liverpool.

Table 6.—Cases of Infectious Disease received into Liverpool Hospital in the 18 months, January 1881—30th June 1882, from among intending Emigrants (mostly being Foreigners).

Year.	Number of Cases of								
	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Fever.	Erysipelas.	Chicken-pox.	Total.
1881	2	40	15	—	—	3*	—	—	60
1882	—	119	17	—	—	3*	—	—	139
Jan.—June.									
Total -	2	159	32	—	—	6	—	—	199

* One case in each year was "typhus."

The above cases, with the exception of the two of small-pox, were received into the workhouse hospital, where they came under the observation of Dr. Robertson, who, in forwarding me the return, expressed his regret at being unable to give the nationalities of the sufferers and dates of attack. He supplied me, however, with the following valuable information with regard to the cases of measles and scarlatina: that some of the sufferers were attacked before they arrived at Hull, that they were sent on to Liverpool by train with the eruption full out upon them in company with a large number of emigrants; further, that two cases of scarlatina that had come through Hull were desquamating freely when admitted to hospital;* also that several cases of measles and scarlatina were admitted to the hospital from lodging-houses, where they had been kept for several days after they were attacked, and this notwithstanding that the house at the time was full of emigrants; further, he states that the two cases of typhus fever were traced to infected houses in the neighbourhood of the lodging-houses where the emigrants were staying. Dr. Robertson remarks that for the want of some place where

* *April* 1883. Whilst this Report is going through the press I learn from Dr. Taylor that cases of measles and scarlatina have recently been received into the Liverpool Hospital in persons recently landed at Hull. From consideration of the observed stage of the disease, there could be no doubt that it might have been detected at Hull, if the passengers had been medically examined there.

emigrant families can be received, when one or two of the members are attacked with infectious disease, whole families have to be taken into the hospital, with the result that several healthy children have contracted disease there.

(*b.*) *Glasgow Hospital.*

Table 7.—Cases of Infectious Disease received into Glasgow Hospital in the 18 months, January 1881—30th June 1882. Glasgow.

Year.	Number of Cases of								
	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Fever.	Erysipelas.	Chicken-pox.	Total.
1881	6	11	—	4	3	1	1	1	27
1882 Jan.—June.	3	24	1	—	—	—	—	—	28
Total -	9	35	1	4	3	1	1	1	55

Of the total 55 cases above given six only were British emigrants, sufferers from measles, two in 1881 and four in 1882.

With regard to small-pox:—In addition to the six cases recorded in 1881, two other cases were received into the hospital that same year, due probably to infected emigrants, one occurring in a servant girl at an emigrant lodging-house, the other in a labourer employed on board an emigrant ship; a third case (a girl) was rejected by the Board of Trade medical inspector and re-landed at Greenock and sent to the infectious hospital there, but it appears, from correspondence that ensued, that she was removed the same night from the hospital to a lodging-house at Glasgow, where she was seen by Dr. Russell, medical officer of health, and another physician, both of whom considered that the girl had recently suffered from small-pox, but was so far recovered as to be no longer in an infective condition; lest, however, there might be danger of her clothes spreading the disease, they caused them to be disinfected.

Of these nine cases four are reported as unvaccinated (one of these proving fatal), four as vaccinated, and one not noted.

On admission to hospital three of the cases were in the papular stage, showing it to be the second or third day of the attack; five were in the pustular stage, denoting from the fifth to the seventh day; and in the remaining case the eruption was passing off, leaving the débris on the skin, probably the 14th or 15th day of the attack. Again:—

Of the *five* cases in the pustular stage, Dr. Russell notes that *two* of them were landed at Leith on April the 18th and received into hospital on April 22nd; *two* left Copenhagen on April the 29th, landed at Leith on May 2nd, and were admitted to the hospital on May 5th. The particulars of the landing of the other cases are not noted, but the inference is that medical inspection on arrival at Leith would have detected the presence of the disease in all these cases, and secured their immediate removal to hospital and so prevented the danger to others incurred by their travelling in an infective condition from Leith to Glasgow, and there going into a crowded lodging-house, where they remained two or three days before they were taken to hospital.

App. A. No. 14.

On Emigration and Immigration, &c.; by Dr. Blaxall.

Queenstown.

(*c.*) *Queenstown Hospital.*

TABLE 8.—CASES of INFECTIOUS DISEASE received into QUEENSTOWN HOSPITAL.

YEAR.	NUMBER OF CASES OF								
	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Fever.	Erysipelas.	Chicken-pox.	TOTAL.
1881	2	—	4	—	—	1	—	—	7
1882	—	7	—	—	—	—	—	8	15
Jan.—June.									
TOTAL	2	7	4	—	—	1	—	8	22

Apparently the above cases, with the exception of that from "fever," were landed from steamers which called at this port, on their way from Liverpool, to embark more emigrants. Another case of small-pox is reported to have been landed from the "Circassian" at Londonderry.

(*d.*) *London Hospitals.*

Small-pox in the Metropolis.

The information I was enabled to glean with reference to the health of emigrants at the Metropolis was very scanty, but I may give the following particulars of *two* cases of small-pox :—

On May 25th, 1882, a servant girl from 51, High Street, Whitechapel, an emigrant lodging-house, was sent to the London Hospital, but as she was found to be suffering from small-pox she could not gain admission there, but was sent to the Small-pox Hospital. The lodging-house in which the case occurred contained at the time many emigrants.

The second case dates from June 16th, 1882, when a man was landed at Blackwall from the "Capella" together with other emigrants, and all went to the lodging-house, No. 16, Wellclose Square. On the 21st the man was so ill that he applied to the London Hospital for admission, which, however, was refused, as the medical man there found he was suffering from small-pox ; he was therefore sent on to the workhouse, and thence to the Small-pox Hospital at Homerton ; in this way the case came to the knowledge of the relieving officer, and he gave notice to the inspector of nuisances, who at once visited the lodging-house, and there ascertained that the infected man had occupied a room with eight or nine other emigrants who the inspector found in the act of preparing to take their bedding off to the ship. This, however, he prevented, and had all the bedding in the room disinfected.

I endeavoured to follow up the movements of the emigrants from this lodging-house, with a view to ascertain if any evil had resulted from their exposure to infection, but I could gain no further particulars respecting them.

I learned upon inquiry at the Homerton Hospital that the man on admission there was found to have been suffering from small-pox for five days or so. A similar case was reported in 1879, but in this instance the sufferer, a girl, was landed at six o'clock in the evening so ill that she was at once taken to hospital.

I may also mention that I find by the report of the port medical officer of health of London that in May 1881 cases of small-pox

were rejected in three instances by the medical inspector of the Board of Trade, viz., three alleged cases from the "Denmark" (one only proving small-pox), and one case each from the "Alsatia" and the "Queen." All were sent to the hospital ship "Rhin."

There can be little doubt that these cases went on board direct from one or other of the lodging-houses, but whether they embarked at the dock, and so went down the river to Gravesend and passed the night on board before they were medically inspected there is no evidence to show. Be this as it may, the medical officer goes on to state that the "Denmark" sailed on the 18th May with over 600 emigrants, and on her arrival in New York three or four fresh cases of small-pox had appeared, and the ship was quarantined and all were vaccinated by the health officer. On the return voyage one of the crew was attacked and died.

(3.) *Cases rejected by the Board of Trade medical inspectors.*

Liverpool Board of Trade medical inspection. Number of cases rejected.

The subjoined Table No. 9 is prepared to show the number of ships inspected at Liverpool by the Board of Trade medical inspectors, from the 1st January 1881 to the 30th June 1882; and the number of these ships from which cases of infectious disease were rejected, together with the number and specific nature of such cases,

Table No. 9.

Year.	No. of Ships inspected at Liverpool.	No. of Ships from which Cases were rejected.	Number of Cases rejected of each of the Specified Diseases.									
			Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Fever.	Erysipelas.	Ophthalmia.	Chicken-pox.	Total.
1881	451	36	4	4	3	—	2	6	—	5	18	42
Jan. to June 1882.	231	30	4	19	2	—	—	7	—	—	8	40
Total	682	66	8	23	5	—	2	13	—	5	26	82

Comparing the above return of rejected cases with that of cases received into the infectious hospital, as given on the preceding Table No. 6 (page 174), an important difference is observed. Thus, as stated on page 168, eight cases of small-pox are shown to have been rejected, whereas two only are accounted for in hospital; in like manner, two cases of whooping-cough, seven of fever, five of ophthalmia, and 26 of chicken-pox appear in the return of rejected cases, in excess of the number of corresponding cases disposed of in hospital, and I have been unable to gain any information as to what became of them.

(4.) *Infectious sickness on board emigrant ships from Liverpool.*

Infectious disease on board Transatlantic ships.

Table 10 showing the number of ships that sailed from Liverpool during the 18 months from January 1881 to 30th June 1882, and the number of these ships that had infectious sickness on board during the passage to North America, and the number and specific nature of the cases that occurred as reported by the surgeons of the ships to the Board of Trade. (It is to be regretted that similar information was not forthcoming with regard to ships sailing from other ports and carrying about the same number of passengers).

Table No. 10.

Year.	No. of Ships that Sailed from Liverpool.	No. of these Ships Infected during the passage out to N. America.	Number of Cases of									
			Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Fever.	Erysipelas.	Ophthalmia.	Chicken-pox.	Total.
1881	451	61	25	97	11	—	—	8	—	—	2	143
Jan. to June 1882.	231	78	5	435	13	—	—	5	—	—	—	458
Total	682	139	30	532	24	—	—	13	—	—	2	601

The above table shows (1) a marked increase in the number of infected ships in the six months of 1882; namely, 78 ships against 61 for the whole of the year 1881; (2) that this increase is due chiefly to measles, which is in keeping with the experience at the infectious hospitals at various ports (see preceding Tables 6, 7, 8), where measles is in excess of the other given diseases; while the evidence points to the disease having been chiefly amongst "transmigrants," cases of measles having been detected amongst them at the ports of debarkation and in their subsequent transit. This view is confirmed by the emigration agents. Again, with reference to the excess of infected ships in 1882, it is noteworthy that ships whence cases were rejected by the Board of Trade medical inspector also manifest a marked increase in the same period, as shown on preceding Table 9. But taking the whole period, cases were rejected in 10 per cent. of the ships examined, whereas 20 per cent. of the ships that sailed from Liverpool are shown to have had infectious disease on board, an important difference of which no data was forthcoming to afford explanation. With regard to the distribution of disease amongst the infected ships (Table 10). Of the 61 ships invaded in 1881, 12 had small-pox, 10 being the highest number of cases in any one ship; 35 had measles, 16 cases being the highest number; four had scarlatina, and 8 had "fever." Of the 78 ships in 1882, four had small-pox; 61 had measles, 39 being the highest number in any one ship; whilst eight ships had 15 cases and upwards; nine had "scarlatina," and five had fever. In addition to the cases given on the above table, certain ships are reported in each year to have had "several cases of measles" on board. The indefinite character of this information, together with the discrepancies between the returns supplied to me respectively by the Board of Trade and the shipping companies, leads me to the conclusion that the amount of sickness shown by the tables by no means represents all that occurred.

The epidemic prevalence of disease in certain ships would suggest a want of due vigilance on the part of the surgeon to detect the first indication of its presence in the ship, and so procure the timely separation of the sick from the healthy; or else a want of efficient means to carry out such isolation.

It has been stated (page 164) that in 1881–82, typhus fever was epidemic at Queenstown, but whether there was any connexion between this disease prevalence and the recorded cases of "fever" on board ship in those years there is no evidence to show.

Taking all the returns together, the recorded sickness in the 18 months January 1881 to June 1882, *exclusive* of rejected cases, amounts

to a total of 895 cases; viz., 45 small-pox, 749 measles, 61 scarlatina, 4 diphtheria, 3 whooping cough, 21 fever, 1 erysipelas, and 11 chicken-pox.

Total amount of infectious sickness.

Of these 895 cases, 294 occurred on shore, and 601 on board ship. The cases on shore were detected, some at the ports of disembarkation, others at the railway stations, others again at the lodging-houses, thereby pointing to the disease in respect of British emigrants having been contracted before they left home; and in respect of transmigrants before they landed in the United Kingdom. It is further instructive to note the excess of infectious sickness detected at the embarkation ports of Liverpool and Glasgow, in comparison with similar detections at the ports of debarkation, Hull and Granton; thus, 3 cases only are recorded at Hull and 13 at Granton; whereas, at Liverpool and Glasgow the cases amount to 199 and 55 respectively, occurring mostly amongst transmigrants, and therefore shortly after their departure from Hull or Granton. Again, comparing London and Glasgow, which in this instance may fairly be done, seeing that in 1881 about an equal number of emigrants embarked from each port, viz. 44,000 and 42,000 respectively, London shows 1 case only of infectious disease received into hospital, against 55 admitted into Glasgow hospital. The probability is that other cases occurred in the Metropolis but never came to light, remaining it may be in lodgings a danger to others, or finding their way into one or other of the hospitals without coming to the knowledge of the sanitary authority. With regard to the 601 cases on board, there is no evidence to determine where these were contracted, but in all likelihood some of them were due to exposure to infection *en route* from the port of debarkation to that of embarkation or at the lodgings.

This amount of preventible sickness assumes considerable importance in view of the fact that it occurred in persons who presumably would leave their homes in good health, and that the passage in which the vessels were engaged was of short duration. And the whole burden of this inquiry goes to show a great deal of avoidable exposure to infection and consequent dissemination of disease, suggesting forcibly the necessity of adopting efficient precautionary measures to protect emigrants from disease, seeing that scarcely could a greater misfortune befall them than to be attacked with dangerous sickness just as they are about to commence life afresh in a new country. Such a calamity might seriously jeopardise their chance of success and blight their whole future career.

I found a very general opinion prevailing that measles was a disease of so trifling a nature that getting it on board ship was a matter of little consequence. But I endeavoured to remove this erroneous idea, explaining that at times the disease assumes a very virulent form, quickly proving fatal, and that damp and cold, conditions often met with on board, greatly conduce to this result, while the sequelæ, even after mild attacks, not infrequently produce lasting injury to eyesight and health. It is highly probable that, if the 532 recorded cases on board ship could be followed up, many of the sufferers would be found to have sustained some such permanent injury.

Infectious sickness amongst Colonial emigrants at the depôt.

From the returns supplied to me by the proprietor of the Plymouth depôt, I find that, out of a total of 12,760 *statute* adults that passed through the depôt in the 18 months ending 30th June 1882, two cases only of infectious diseases are recorded as occurring amongst them, viz., one of measles and one of scarlatina.

On board chartered ships.

These emigrants embarked in 44 ships chartered by the New South Wales, Queensland, and South Australian Governments, and the Agents General inform me that during the voyage five ships suffered from

infectious sickness, viz., four ships from measles, with 22, 4, and 2 single cases respectively, and the fifth ship, from scarlatina, 2 cases.*

These returns deal with small numbers in comparison with the Transatlantic ships, but the immunity from infectious sickness at the Plymouth depôt, and the small amount occurring in the ships, together with the entire absence of small-pox, goes far to commend the depôt system, together with the precautionary measure adopted by colonial governments in requiring a certificate from intending emigrants to the effect that they are free from infectious disease, and have been vaccinated or had small-pox.

(5.) *Small-pox amongst Ships' Crews.*

Small-pox amongst the crews of passenger ships.

Small-pox has from time to time attacked the crews of ships belonging to various companies, contracted in some instances through attendance on infected passengers; the disease in certain ships manifesting a persistent character.

The "Denmark."

The steamship "Denmark" has already been cited as having had small-pox amongst the passengers on her way out to New York, when one of the crew contracted the disease and died on the passage home.

The "Victoria."

In the "Victoria" small-pox appeared amongst the passengers on her way out from London to New York, and the surgeon and two stewards are reported to have contracted the disease in assisting a lady passenger to disembark there.

The "Republic."

In the "Republic" a steward contracted the disease through attendance upon an infected passenger.

The "Peruvian."

In the "Peruvian" the first sufferer was a passenger attacked on the outward voyage, followed by two firemen and a steward; two other firemen being attacked on the homeward voyage.

The "Winconsin."

The "Winconsin" offers such a typical example of the manner in which small-pox may be spread, that I give the particulars in full.

This ship arrived at Liverpool from New York on the 28th May 1881 with two cases of small-pox on board, one a passenger, the other one of the crew. Both cases were removed to hospital. Two of the other passengers landed and proceeded to St. Austell in Cornwall, where they shortly sickened with small-pox. The rural sanitary authority reported the circumstance to the Local Government Board, complaining that small-pox had been introduced into their district by infected passengers from Liverpool.

The Local Government Board accordingly wrote to the sanitary authority of Liverpool, requesting to be supplied with information upon the subject; and in reply received the following letter from Dr. Taylor:

"The medical officer of health begs to report that the 'Winconsin' arrived in the Mersey on the 28th of May, having a passenger on board suffering from small-pox. The patient, and the man who had been in attendance upon him and showed slight symptoms of the disease, were removed to the Netherfield Hospital; the bedding and wood-work of the cabin which they had occupied was burned, and the vessel thoroughly disinfected. The medical officer of health was informed that a number of miners returning from Nevada had joined the ship at New York, and as soon as the vessel got out to sea the small-pox case was discovered, having been taken on board without the knowledge of the ship's

* *August* 1883. While this Report is going through the press it has come to my knowledge that the "Duchess of Argyle" sailed from Plymouth for Sydney on the 16th November 1882 with 444 emigrants, and six weeks afterwards scarlatina appeared on board. The surgeon of the ship reports the "outbreak to have been "coincident with the opening out of the passengers' luggage which had previously "been in the hold of the ship," and he infers that the outbreak was due to infected clothing. Would not such occurrences as these, if duly investigated and recorded, combine into a body of information that would be ultimately of considerable use?

surgeon. The persons mentioned by the medical officer of St. Austell were no doubt friends of the sick man, and had accompanied him from Nevada, but they did not manifest any signs of the disease upon their arrival at Liverpool, and could not therefore be prevented from proceeding on their journey."

On the 4th June the "Winconsin" sailed again, and on arrival at Queenstown a fireman was sent to the infectious hospital with small-pox and died.

Before reaching New York eight other cases occurred, and were sent to hospital there. Meanwhile, on the 8th of June, one of the crew who came home in the "Winconsin," but did not go out in her again, and who resided at 47, Hopwood Street, was sent to Netherfield Hospital with small-pox, and subsequently a number of other cases occurred in the same locality, and apparently owed their origin to this man's case.

Now the small-pox apparently appeared very soon after the vessel had sailed from New York, so soon that had the passengers been subjected to careful medical inspection, the embarkation of the infected person would most likely have been prevented; instead of which the disease was introduced into the ship where it spread amongst passengers and crew, and was subsequently conveyed to St. Austell, Queenstown, and Liverpool, and taken back to New York on the return of the "Winconsin" to that city. Besides the steamships above quoted, the "Garonne," the "Rakaia," the "City of Brussels," the "Bothnia," and the "Lord Gough," may be mentioned as examples of vessels in which small-pox attacked the crews. The fact of the crews in so many instances being amongst the sufferers from this fatal disease, is a forcible illustration of the danger incurred through their not being protected by re-vaccination, more particularly where they are employed to attend upon infected passengers.

Mortality on board Emigrant Ships.

With regard to the amount of mortality on board emigrant ships, the only information I have been able to get under this head is contained in a return published by the Board of Trade in obedience to an order from the House of Commons, showing the number of passengers embarked on board British vessels for North America, Australasia, Cape of Good Hope, and Natal, during the year 1881, and the mortality on board those vessels amongst the passengers and crews, classified according to the lines to which the vessels belonged.

I would observe that the value of the said return would be greatly enhanced if the causes of death were specified, also the number of ships of each line that sailed, and the number of passengers and crew respectively that embarked in each ship, together with the deaths that took place amongst them. Deaths from suicide and drowning should, I think, be given separately, the latter being accidental, and when amongst the crew incurred probably in the execution of their duty or perhaps in their humane endeavour to save life.

It will be seen by the subjoined table abstracted from the return above referred to, that out of a total of 63,492 children that embarked in the Transatlantic ships 114 or 17·95 per 10,000 died; and out of a total of 315,850 passengers (adults and children) 186 or 5·8 per 10,000 died. In the absence of further particulars this mortality seems excessive, considering it occurred within twelve days of sailing in persons who it is supposed would start in good health, and who with a view to insure this are medically inspected, save in the less important case of "short ships," on embarkation.

Again 10 deaths are recorded of infants born on board; apparently a high number, but probably admitting of explanation by premature births brought on by sea-sickness or other causes; more precise information

App. A. No. 14.

On Emigration and Immigration, &c.; by Dr. Blaxall.

being required on this point as well as to the number of births which took place.

With regard to the Australasian ships, out of a total of 2,903 children 26 or 89·5 per 10,000 died, and out of a total, 16,764 passengers, 54 or 32·2 per 10,000 died. Comparison cannot for various reasons be made between the respective mortality of the Australasian and Transatlantic ships, the passage to Australasia occupying so much longer a period than that to North America, besides involving considerable changes of climate and long exposure to tropical heat: conditions that exercise an important influence upon health. This, however, would not hold good to the same extent in respect of liners bound to the same part of the world, but here again before the figures can be of value in the way of enabling such comparison to be made, information is required under the several heads herein-before noted, and, as regards Australasia, particulars also as to the precise route taken, whether by the Suez Canal or by the Cape, and the colony visited; the voyage to New Zealand occupying some twenty or thirty days longer than that to Sydney.

TABLE 11.—EMIGRATION MORTALITY IN 1881.

NORTH AMERICA.

LINE OF VESSELS.	NUMBER OF PASSENGERS.			DEATHS.			
				Passengers.			Crew.
	Adults.	Children and Infants.	Total.	Adults.	Children and Infants.	Total.	
Allan Line	32,743	8,465	41,208	6	10	16	—
*American Line	13,198	4,144	17,342	4	16	20	—
Anchor Line	28,238	8,105	36,343	4	23	27	1
Barrow S.S. Company's Line	840	179	1,019	—	2	2	—
Beaver Line	87	25	112	—	—	—	—
Cunard Line	34,455	7,411	41,866	4	10	14	5
Dominion Line	4,580	1,161	5,741	1	3	4	2
Great Western S.S. Company's Line	507	170	677	—	—	—	1
Guion Line	18,857	5,665	24,522	10	8	18	—
Inman Line	38,128	8,262	46,390	8	6	14	1
Monarch Line	2,638	1,119	3,757	2	3	5	—
National Line	30,085	8,090	38,175	8	15	23	3
State Line	13,651	3,890	17,541	2	10	12	—
Warren Line	4,187	1,162	5,349	—	1	1	—
White Star Line	30,164	5,644	35,808	6	7	13	1
TOTAL	252,358	63 492	315,850	55	114	169	14
ADD—Suicides and Deaths by Drowning				7	—	7	10
„ Deaths of Infants born on the Voyage				—	10	10	—
TOTAL DEATHS				62	124	186	24

AUSTRALASIA AND PLACES EN ROUTE.

British India S.S. Company's Vessels	838	168	1,106	3	3	6	—
Orient Line	7,784	1,285	9,069	11	3	14	3
"Miscellaneous" (not classified)	5,189	1,450	6,589	6	20	26	3
TOTAL	13,861	2,903	16,764	20	26	46	6
AND—Suicides and Deaths by Drowning				2	1	3	6
„ Deaths of Infants born on the Voyage				—	5	5	—
TOTAL DEATHS				22	32	54	12

* The return for this line refers only to British ships chartered by the American Steamship Company of Philadelphia.

TABLE 11.—EMIGRATION MORTALITY IN 1881—*continued.*

LINE OF VESSELS.	NUMBER OF PASSENGERS.			DEATHS.			
				Passengers.			
	Adults.	Children and Infants.	Total.	Adults.	Children and Infants.	Total.	Crew.
CAPE OF GOOD HOPE, NATAL, AND PLACES EN ROUTE.							
Colonial Mail Line	3,984	534	4,518	3	—	3	—
Union Line	6,775	1,404	8,179	3	2	5	1
TOTAL	10,759	1,938	12,697	6	2	8	1
ADD—Suicides and Deaths by Drowning				1	—	1	4
" Deaths of Infants born on the Voyage				—	—	—	—
TOTAL DEATHS				7	2	9	5

INFECTIOUS DISEASE OF FORMER YEARS.

Recorded sickness amongst emigrants in former years.

Before closing this section of the report it seems desirable to refer to certain recorded particulars of dangerous sickness occurring amongst emigrants in former years, as illustrative of the manner in which it has been imported into this country; and of the terrible fatality that has marked the presence of infectious disease on board certain emigrant ships. Dr. Taylor at the International Medical Congress in 1881, when speaking on the subject of the importation of infectious disease into Liverpool, gave the following particulars with reference to cholera in 1866:

Cholera on board Transatlantic ships.

(1.) The steamship "England" sailed from the Mersey on the 28th of March, and six days afterwards a Dutch boy who embarked at Liverpool died of cholera, and by the time the ship reached Halifax, 12 days from sailing, 92 deaths had occurred; 86 out of 1,200 passengers, and six of the crew.

(2.) The "Virginia steam ship" sailed on the 4th of April with 721 passengers, and eight days afterwards three of the passengers (foreigners) died of cholera, and before the 23rd of May, 105 of the passengers had fallen victims to the disease.

(3.) The "Helvetia" sailed on 2nd May with 925 passengers, of which 527 were foreigners, some from Rotterdam, others from Germany. Shortly after leaving harbour two deaths occurred from cholera, and the vessel in consequence put back to Liverpool, and the passengers were transferred to hospital ships, where 46 deaths occurred, including the surgeon of the ship.

Several other vessels sailing from the Mersey for America had outbreaks of cholera on board.

Cholera and relapsing fever introduced into Liverpool.

The first recorded cases in the town occurred in an emigrant lodging house in two transmigrants who had intended embarking in the "Helvetia." These cases proved fatal on the 2nd of May, followed by two other cholera deaths in the same house (also transmigrants for the "Helvetia").

On the 2nd of July a resident of the town died, and from that date to 30th November 1,763 deaths from cholera took place.

The evidence here given points to the disease having been introduced into Liverpool by transmigrants.

The same with regard to relapsing fever which Dr. Taylor states was introduced into Liverpool in 1870 by transmigrants, and continued to prevail the two following years, causing in all 587 deaths.

Cholera introduced into the Metropolis.

One more instance of the introduction of cholera by transmigrants may be adduced as threatening danger to the Metropolis. The steamer "Iris" arrived in the Thames in July 1873 from Kiel, Copenhagen, and Hamburgh, with 82 Danish and Swedish emigrants on board, who were landed at Blackwall and sent to lodging-houses in Whitechapel. A few hours after arrival there, two of them were attacked with cholera, one case proving fatal. This was reported to the Local Government Board, who instructed Dr. Buchanan to inquire into the case and take the necessary steps to prevent the spread of the disease. This he accordingly did, securing the removal of the remainder of the emigrants to the hospital ship "Rhin." The healthy emigrants were afterwards transferred to the "Osprey" for observation purposes. In all 28 cases occurred, with eight deaths. It would seem that this prompt action saved the Metropolis from an epidemic of cholera, as no further cases appeared.

On the 17th July the Local Government Board issued an order with regard to cholera, giving increased powers to local authorities.

Infectious diseases on board Colonial ships.

In contradistinction to the small amount of sickness shown to occur in the colonial chartered ships of the present day, I would refer to the very serious mortality which resulted from infectious disease on board four colonial chartered sailing ships in 1852 in their passage from Liverpool to Australasia, as shown in a return ordered by the House of Commons, and printed on the 8th of March 1853 :—

(1.) The "Bourneuf," out of 754 passengers, lost 84, principally from measles and scarlatina.

(2.) The "Marco Polo" carried 887 passengers; of these 52 died principally from *measles*, the disease manifesting itself within 24 hours of leaving Liverpool.

(3.) The "Wanata." Out of 758 passengers, 48 died of what was characterised as "fever of a low type."

(4.) The "Ticonderoga" sailed from Liverpool on the 4th of August with 800 passengers on board, and arrived at Hobson's Bay on the 4th November, having lost 102 passengers from "scarlatina" and "typhus fever," and 300 cases of sickness (principally scarlatina) being then present on board.

It would appear that the mortality on board these four ships was chiefly amongst children.

PART IV.

Immigration and Intermigration.

	PAGE
Immigration	184
Maritime intercommunication	186
Inspection of vessels under Public Health Act	186
Beneficial results	187
No inspection at certain ports	187
Infectious disease detected :	
In coastwise vessels	188
In foreign traders	189
Cases escaping detection by Customs, &c.	189

Immigration.

Immigration.

The immigration into the United Kingdom from places out of Europe, although not assuming the important dimensions of emigration, is still very considerable, and, like emigration, of a fluctuating character.

The subjoined table supplied to me by the Board of Trade shows the amount of immigration into the United Kingdom from specified countries in the nine years 1873–81.

British and foreign are distinguished for the last six years 1876–81.

TABLE No. 12.—NUMBER of BRITISH and FOREIGN IMMIGRANTS who arrived in the UNITED KINGDOM from Countries out of EUROPE and not within the MEDITERRANEAN SEA, in each of the Years from 1873 to 1881.

COUNTRIES WHENCE ARRIVED.	1873.	1874.	1875.	1876.			1877.			1878.			1879.			1880.			1881.		
	TOTAL.	TOTAL.	TOTAL.	British.	Foreign.	TOTAL.	British.	Foreign.	TOTAL.	British.	Foreign.	TOTAL.	British.	Foreign.	TOTAL.	British.	Foreign.	TOTAL.	British.	Foreign.	TOTAL.
United States	68,536	100,527	80,045	54,697	—	72,592	44,878	15,915	60,825*	34,040	20,949	54,989	20,048	13,995	34,043	26,518	18,970	45,488	29,781	21,416	51,197
British North America	5,862	7,791	6,577	6,629	—	7,284	5,687	305	5,992	6,204	197	6,401	3,497	143	3,640	4,688	396	5,084	5,761	438	6,199
Australasia	2,574	1,892	2,108	2,579	—	2,761	4,637	65	4,702	4,207	196	4,403	4,967	327	5,294	5,910	380	6,290	5,877	431	6,308
Cape of Good Hope and Natal	9,444	7,919	5,498	7,499	—	1,920	8,688	1,470	10,329*	10,493	1,665	12,158	9,424	1,572	10,996	9,891	1,563	11,454	11,288	2,113	13,401
Other Countries																					
TOTAL	86,416	128,129	94,228	71,404	—	93,557	63,890	17,755	81,848	54,944	23,007	77,951	37,936	16,037	53,973	47,007	21,309	68,316	52,707	24,398	77,105

* The discrepancy between the total and the sum of the British and Foreign is accounted for by the number of Immigrants whose nationality was not distinguished.

Reference to the above table shows the highest number of immigrants in any one year was 128,129 in 1874; and the lowest number 53,973 in 1879, being in inverse proportion to emigration, which in 1874 exhibited a decline, while in 1879 great activity is manifested, the numbers being more than one third in excess of the preceding year 1878. (*See* Table 3, page 134.)

The emigration and immigration returns together afford evidence of the immense amount of intercommunication maintained between this country and the United States; to which probably the shortness of the passage, combined with the facility and comfort with which it can be accomplished in the Transatlantic steamers has conduced. In all likelihood many of the so called immigrants are virtually travellers selecting this route to the European continent.

Introduction of disease into the United Kingdom by immigrants.

As regards the introduction of infectious disease into the United Kingdom by means of immigrants. These stand on the same footing as crews of ships from foreign ports, being subject to inquiry by the custom-house officer, and if disease should be found amongst them the fact is reported to the medical officer of health, who takes the necessary steps to prevent the introduction of the infection into the port and into the country. In this way, Dr. Taylor reports, that since 1877 he has received information of 86 ships arriving from the United States with infectious disease on board, viz., 20 with small-pox, 35 with measles, 14 scarlatina, 1 diphtheria, 15 fever, and 1 yellow fever.

In 1880 scarlatina was reported to Dr. Taylor as being on board the "Scythia," but when the officer of the sanitary authority boarded the ship with a view of removing the infected person to hospital, he found the sufferer had been taken by her father to an hotel. Proceedings (under the Public Heath Act, 1875, s. 126) were taken against the father, and a penalty of 5*l.* inflicted.

Another case came under notice where a scarlatina patient was removed from a ship to the hospital without being reported to the medical officer of health.

Maritime Intercommunication between Home Ports.

Maritime intercommunication.

The immense maritime intercommunication that takes place between the various ports of the United Kingdom is carried on by vessels specially engaged in the passenger traffic and coasting trade.

It would be beyond the province of this report to attempt to treat exhaustively of the health of this large floating population, but my instructions extending to inquiry into the broad principles and conditions which regulate and control the movements of these vessels, I have deemed it well to consult the reports of the medical officers of health of Newcastle-on-Tyne, Sunderland, and Shoreham; these, together with the emigration ports herein-before referred to, being representative ports of the coasting and foreign trade.

Port sanitary administration

The Port Sanitary Authorities of London, Liverpool, Newcastle-on-Tyne, Sunderland, Southampton, and Shoreham appoint each a medical officer of health and an inspector of nuisances, to carry out the various sanitary duties of the port under the several provisions of the Public Health Act relating to nuisances and disease prevention, which extend to vessels in harbour in so far as they can be applied. These officers, under section 92, are required to inspect vessels in harbour as to their sanitary condition, paying particular attention to the accommodation provided for the crew with regard to cubic capacity, cleanliness, and provision for ventilation and light, also to the privy accommodation and

Inspection of vessels.

the water supply, and reporting any condition or circumstance that may come under observation likely to exercise injurious influence upon health.

The facility or otherwise with which the various duties may be carried out, is greatly dependent upon the physical outline and general character of the port districts. For example, the port of London, with its length of river, numerous anchorages, and extensive docks, together with the crews generally living on board, entails considerable labour and attention. But with the aid of a steam launch much supervision is exercised over the shipping. Dr. Collingridge, port medical officer of health, reports 137,968 vessels as inspected in the last nine years, giving an average of 15,329 per annum, some at anchorages in various parts of the river, others in dock. There have also been a large number of vessels subjected to disinfection through infectious disease having occurred on board during their absence from England.

The reports of the port medical officers of health bear unanimous testimony to the beneficial results of these inspections, showing that whereas formerly from 50 to 60 per cent. of the vessels examined were found in an unwholesome condition, now only from 10 to 12 per cent. are so reported: while not the least gratifying circumstance is the readiness displayed by owners and masters to carry out the suggested improvements.

It appears that at Sunderland these inspections at first met with opposition from foreigners, but on a letter being addressed to the respective consuls ready compliance followed.

Bristol and Plymouth are examples of ports where very little is done to give effect to the Public Health Act. No inspectors of nuisances are appointed, nor is the sanitary condition of vessels made the subject of inspection. The same applies to Queenstown.

With regard to Scotland, here again there is no inspection of the sanitary condition of vessels, and the want of an amalgamated authority for port sanitary purposes greatly militates against the efficient administration of the Public Health Act (Scotland) in relation to vessels, and is moreover attended with much inconvenience and irregularity of proceeding. This was exemplified in the case of the "Camoens" steamer (referred to on page 173), which arrived in the Frith of Forth with 11 cases of measles on board and anchored off Granton in the local sanitary district of Cramond, where there is no infectious hospital. The medical officer of health of the Cramond district, having no instructions as to the course to be pursued in such emergency, spent some hours in vainly endeavouring to obtain advice, and at last got the infected persons landed and conveyed to the infectious hospital at Edinburgh. Now, had the "Camoens" anchored at Leith a little more to the eastward she would have come under the jurisdiction of the Leith sanitary authority, and the cases would at once have been taken to the infectious hospital there, but to have anchored at Leith would have entailed heavier port dues than anchorage at Granton, which, I am informed, is the reason the latter was preferred. Between Leith and Granton, a distance of about a quarter of a mile, *three separate jurisdictions* are concerned, viz., Leith, St. Cuthbert, and Cramond; such divided responsibility cannot be expected to work satisfactorily, and Dr. Littlejohn, Medical Adviser to the Board of Supervision of Scotland, tells me he has brought under notice of the several authorities the advantages to be derived from an amalgamation of their districts for port sanitary administrative purposes.

Greenock, on the south bank of the Clyde, labours under similar disadvantages, for, although forming one out of many sanitary districts

that on either side abut on the waters of the river, it has, from its commercial status and its situation at the entrance of the long reach of river stretching up to the important town of Glasgow and beyond, come to be chiefly concerned in the sanitary administration of the port. It is, moreover, the station of the customs; thus vessels arriving from foreign countries are here boarded by the customs house officer, and any case of infectious sickness that may come under his observation is reported by him to the Greenock sanitary authority. They recognising the responsibility devolving upon them, and the vital importance, in their own interest as well as that of Glasgow and the surrounding neighbourhood, of adopting due precautionary measures to prevent the introduction of infectious disease, have drawn up, and issued for the guidance of their sanitary officers, and for the masters of vessels, special instructions respecting the landing and removal to hospital of infected persons, and the disinfection of the infected ships. At the same time they have brought under notice of the Board of Supervision the expense they have been put to in carrying out the sanitary duties which from circumstances have been thrust upon them; and I observe that Dr. Littlejohn in his report on the conveyance of infectious disease from Port Glasgow to Greenock, dated 30th July 1879, recognises the energetic action of the Greenock local authority, together with the expense they have incurred thereby, and the national importance of the work done by them.

There can be little doubt that an amalgamation of the several districts concerned would be attended with considerable benefit, and this view is shared in by the medical officers of health of Glasgow and Greenock, also by the sanitary inspector of Greenock, all of whom have had much experience of the working of the present system.

Detection of infectious disease in coastwise vessels and foreign traders.

To return to the inspection under the Public Health Act of vessels in English ports: — These inspections it must be remembered can include a portion only of the numerous vessels that are continually going to and fro, and, moreover, are made at times convenient to the officers concerned, and not necessarily immediately on the arrival of the vessels in harbour; they cannot, therefore, be regarded in the light of a completely preventive measure; nevertheless, the medical officers of health report that they have from time to time been instrumental in discovering the presence of infectious disease both in coastwise vessels and foreign traders, Dr. Collingridge citing 40 instances in which small-pox has been detected on board vessels in dock or at anchor during the last 5½ years, the disease in 30 instances having been contracted in London; the probability is that, but for these timely detections, it would have been carried to other ports.

The coastwise vessels are free to go from port to port unchallenged as to health, and thus have opportunity of spreading disease, but the extent to which it has been transmitted through their agency cannot be determined, the reports of the medical officers of health being, as a rule, *indefinite* on the subject. Thus, the late medical officer of health of the Port of London states that small-pox has *frequently* been introduced into the metropolis by coasting vessels. Dr. Taylor, that typhus fever has from *time to time* been brought to Liverpool from Ireland. He mentions a case of a sailor belonging to a vessel from Waterford walking up to the hospital two or three days after his arrival in port with eruption of small-pox out upon him.

Again, the medical officer of health of Newcastle reports two instances in 1881 in which small-pox was detected in vessels from London. One was that of a mate discovered to be suffering from small-pox two or

three days after arrival, and upon inquiry it transpired that when he left home some members of his family were ill with the decease.

The clerk to the same authority represents the frequency of the danger to which the people living on the thickly populated banks of the Tyne are exposed through the landing on their shores of infected persons from coasting vessels.

Where vessels are known to have come from infected ports certain of the medical officers of health endeavour to arrange for their early inspection; they find, however, much difficulty in acquiring information on this point, certain ports only being included in the Registrar General's weekly returns of mortality.

Here I would remark that, if the Government could see their way to securing the registration of communicable disease, it would prove a very useful measure, Scotland and Ireland being included therein; and would be specially valuable if the particulars were collected and published by the central authority. Further, infectious disease being the universal enemy of mankind, all peoples might here meet on neutral ground to do battle against its progress, and in this sense if a mutual understanding could be arrived at with foreign Powers for the interchange of information respecting the presence of infectious disease, it would go far to insure a successful issue, the old proverb "to be forewarned is to be forearmed" being specially applicable to disease prevention.

Infectious disease escaping notice of customs house officer.

With regard to the detection of infectious disease on board foreign traders:—It appears that this from time to time occurs in vessels that have been passed by the custom house officer, the presence of the disease escaping his inquiry.

Dr. Collingridge mentions nine instances of the kind, viz., six in respect of small-pox, one of scarlatina, and two of typhoid fever.

Dr. Taylor, two instances of small-pox, one of scarlatina, and one of typhoid fever.

Dr. Armstrong of Newcastle, the detection of a case of typhoid fever and a case of small-pox, the former having escaped the custom house officer through the captain's mistaking it for a simple cold; the latter case through wilful misrepresentation of the captain, for which he was prosecuted and fined 20*l*.

These examples tend to confirm the view expressed in a former part of this report (page 164), that the system of custom house inquiry is not of the best nature to detect the presence of infectious disease. And, moreover, where it is effectual to this end there is often much delay before the medical officer of health can be communicated with, and the necessary steps taken to secure the isolation of the sufferers who in the meantime are occasionally landed, to wit, the case of scarlatina from the "Scythia" already quoted on page 186. Dr. Collingridge also records another instance in which a case of scarlatina reported to him by the custom house officer had landed before the sanitary officer got on board; and, referring to the difficulty he experiences in dealing with such cases, he states that he made arrangements for the cases to be reported to the medical officer on board the hospital ship "Rhin," so as to enable immediate action to be taken, but this apparently does not work well, as the vessels, instead of waiting for the sanitary officer to come on board, continue their course up the Thames, affording opportunity for communication with other vessels, or perhaps with the shore before any action can be taken in the matter.

Reports of medical officers of health.

From the numerous references made to the reports of certain medical officers of health, it is obvious that they contain much useful information, but I would submit that, with respect to infectious disease, their value

would be greatly enhanced if the particulars connected with the history of the cases that come under their notice were entered in a tabulated form of uniform character, noting the port sailed from, date of sailing, date of attack, and nature of disease, date of arrival in harbour, and, under the head of remarks, such information as they can glean respecting the origin of the cases.

In devising measures in relation to passenger traffic for the protection of public health, and preservation of the health of the emigrant, it is essential in the interest of commerce that they should be non-obstructive and inexpensive, so as not to hinder trade or impose a burden upon the shipping companies that would weight them in their competition with foreigners, or cause them to raise the passage tariff. At the same time seeing that the shipping companies primarily benefit by the traffic, it is only reasonable that they should be called upon to contribute proportionally to the expense attending the adoption of measures for the protection and preservation of the health of their passengers and crews.

Summary and Recommendations.

In summarily reviewing the results of this inquiry tribute must be paid to the various shipping companies by whose enterprise, intelligent forethought, and careful management, the emigration traffic has developed into so gigantic a business. The excellent qualities of the ships employed therein, combined with the punctuality with which the voyages are accomplished, and the liberal treatment accorded to the emigrants, have gained for the several companies a widespread fame securing to them the confidence not only of the British people, but of foreigners, as testified by the numbers that annually come over to this country to re-embark for other lands. As further conducing to this result the various provisions of the Passengers Acts, that bear upon this subject must not be lost sight of, legislating as they do for the well-being and comfort of the emigrants, and at the same time allowing considerable scope of action to those immediately engaged in the traffic.

But, in spite of all that has been done by the Legislature and the shipping companies to promote the general success of emigration, and in contradistinction to the well-organised arrangements that characterise the emigration traffic generally, this inquiry shows that matters relating to disease prevention are carried out in an unsatisfactory fashion, with the result that infectious disease in one form or another is liable to mark the track of emigrants from port to port of this country, and to be frequently carried by them on board ship to the imminent risk of other passengers.

Except by certain of the Colonial Governments, no steps are taken to insure intending emigrants being free of infectious disease when engaging their passage. The advantage of this precautionary measure as well as of the depôt system in comparison with emigrant lodging-houses, is shown by the comparatively small amount of infectious sickness occurring at the depôt and on board the ships chartered by the Colonial Governments.

Certain of the shipping companies provide for the medical examination of emigrants at the lodging-houses. And when they are on the point of leaving the country, then, in accordance with the provisions of the Passengers Acts, the passengers, if they exceed 50 in number, are required to undergo examination by a medical inspector appointed by the Board of Trade, but that is all.

Persons who have come from the continent of Europe for the purpose of emigrating in English ships are not examined as to their health

at the time of their arrival in England. The administrative department especially entrusted with the care of the public health is in the anomalous position of having no concern with infectious disease in any such person at the moment of its introduction; this duty devolving instead upon officers appointed by the Board of Customs, whose inquiries, though not of the best nature to detect the presence of infectious disease, leave the passenger who has once passed them free to land on our shores and to travel at will through the country to his final port of embarkation, without being subjected to any medical inspection until he is about to depart.

In the event of infectious sickness appearing amongst intending emigrants, it becomes the duty of the local sanitary authority of the district where they may find themselves at the time, to employ the powers vested in them by the Legislature for the prevention of the spread of disease. In districts most likely to be thus invaded the authorities commonly recognise the obligations and responsibilities imposed upon them, and are careful to provide infectious hospitals, to secure the good order, cleansing, and wholesome condition of lodging-houses, and generally to put the law in motion where infringement of the same is brought under their notice. The Public Health Act, however, gives no power to deal with cases of an indeterminate character and an intending emigrant with symptoms of impending attack of small-pox or other infectious disease, would still be at liberty to travel in company with other emigrants, stay at lodgings with them, or go about the district at pleasure, and the authority would be powerless to interfere with his movements until the disease had actually declared itself. In the case of the emigrant, it would seem possible to limit the opportunity of distributing infection from these undeveloped cases.

To return to the Board of Trade inspection on departure: Here the provisions of the Passengers Acts empower the medical inspector to deal with cases of suspicion and to order the re-landing of any persons who may present symptoms of infectious disease, and be liable in his opinion to endanger the health of the other passengers. It is shown in this Report that the re-landing of such rejected cases formerly resulted in the spread of disease amongst people on shore, and that arrangements have since been made between the Board of Trade, the local authorities, and shipping companies concerned to prevent a recurrence of the danger. Where rejected cases have been re-landed and sent direct to the infectious hospital, the healthy members of the family have sometimes been included with them, and as a consequence have contracted the disease.*

Infectious sickness carried on board Transatlantic ships has on various occasions spread to some considerable extent amongst the passengers, owing it would seem to the neglect of due precaution in the way of procuring early detection of premonitory symptoms, together with the want of hospital provision ready at command for the timely isolation of the sufferers.

With reference to the maritime intercommunication between home ports, it is shown that there are no regulations in force to insure the crews of coast-wise vessels leaving port in a healthy condition, and no organised arrangements for the detection of infectious disease on board

* The captains of emigrant and other ships going to foreign or colonial ports are required to provide themselves with a bill of health certifying that the port sailed from is free from infectious disease. This document is usually signed by an officer of the Customs who has little or no opportunity of becoming acquainted with the state of health of the port for which he certifies.

such vessels when they arrive in port. It is found that in certain of the English ports the statutory duties devolving upon the Port Sanitary Authorities are efficiently carried out; that provision is made for the inspection of vessels in harbour; and the satisfactory results of such action is shown by the marked diminution of vessels now reported to be in an insanitary condition compared with the former years. In other ports the duties are very partially fulfilled. In Ireland vessels are suffered to go to and fro without any inspection; whilst in Scotland there are no constituted port sanitary districts.

The whole burden of this inquiry goes to show the necessity for better means of regulating the passenger traffic, with a view to protecting the British public, the emigrants, and other countries against the spread of dangerous infectious disease; while, along with the interests of health, regard is had to other interests concerned in emigration. Sanitary measures must not be vexatious nor burdensome so as to cause delay in the traffic, nor must they unduly weight English shipping companies by compelling them to raise the passenger tariff.

It may be stated that, throughout the inquiry, the officers of the various departments have appeared to be performing the duties entrusted to them according to their several lights, and that they have worked harmoniously as far as arrangement between themselves was concerned; and the failure to secure the desired end has appeared due to the want of a proper organised system, and the health authorities proper having so little to do in the matter. It should be the object of an improved system to secure better medical supervision, and to give to local sanitary authorities their proper responsibility with regard to sick people of the emigrant class.

[The existing sub-division of administration in regard to questions affecting public health militates somewhat against the efficient carrying out of needful measures of disease prevention. From the circumstance of the Public Health Acts of England, Ireland, and Scotland being administered independently of each other, it may chance that infectious disease prevails in one portion of the United Kingdom without coming to the knowledge of the Government of other divisions of the kingdom, as in the recent instance recorded in this report, where typhus fever prevailed at Queenstown for nearly two years, constituting a considerable danger to the home and foreign trade, and the Imperial Government knew nothing about it.

And with this division of health administration must be considered the further subdivision observed at the several ports; where the health of the emigrants is made the subject of official concern of the Custom House authority, the local sanitary authority, and the Board of Trade. The first admits the emigrants into the country, the Board of Trade passes them out of it, while the local authorities are merely called upon to act when made aware of any cases of infectious sickness occurring amongst the emigrants in their passage through the country.

The present divided system, and the want of proper organisation and arrangement for the protection of the health of the public as well as of the emigrants, cannot but be connected with the amount of infectious sickness recorded in this report; as for example in the case of cholera introduced years ago by foreign emigrants into Liverpool, where it spread in the town, and was also carried on board several ships, and spread to their passengers; or, as in the case of relapsing fever in like manner introduced into Liverpool, prevailing there for some two years, and causing 587

deaths:—while the frequent detection of small-pox, measles, scarlatina, &c. amongst emigrants at the various stages of their progress from port to port in this country testifies to a frequent danger to English public health involved in the present emigration traffic—a danger which might be materially reduced if a better system were adopted.]

Recommendations.

In the following recommendations, the foregoing considerations have been held in view:—

(1.) *As to intending emigrants:*—

It is desirable that (*a*) shipping agents should be instructed to inquire carefully as to the health of intending emigrants and their families with regard to freedom from dangerous infectious disease (small-pox, measles scarlatina, diphtheria, whooping-cough, typhus, typhoid fever, cholera, erysipelas, chicken-pox). Also, as to whether they have been vaccinated, re-vaccinated, or had small-pox. The form of inquiry should be incorporated on the contract ticket, so as to remove it from the sphere of chance. (*b.*) The shipping companies should instruct their agents to keep themselves acquainted with the health of the districts in which they reside, and to report to the companies the prevalence of any infectious disease. (*c.*) The agents should impress upon the emigrants the importance of avoiding any exposure of themselves to infection after engaging their passage; should advise them as to the best lodgings to go to at the ports of embarkation; and should use their best endeavours to prevent the bringing on board of ships any bedding or other articles that may have been exposed to infection.

There would, however, be considerable advantage if inquiries of the above sort were made, and needful action taken upon them, and if also the requisite medical supervision and examination of emigrants were ordered, by a single Authority; instead of being divided, as at present, between officers responsible to shipping companies, to the Board of Trade, and to the local sanitary authority; and there would be certain further advantages if the emigration health authority of each port could be in relation with the authorities of other ports. Experience will show whether some other functions in regard of the health of shipping while out of port would not naturally devolve upon the same health authority.

(2.) *As to medical inspection of emigrants:*—

(*a.*) On arrival in the United Kingdom from the Continent of Europe emigrants on their way to America and elsewhere should be subjected to efficient medical inspection in a duly appointed place suitable for the purpose.

(*b.*) All emigrants should be placed under systematic medical supervision during their stay in lodgings pending embarkation, with a view to the immediate detection of any symptoms of infectious disease among them.

(*c.*) The final inspection of emigrants before embarkation should be made by the same medical officer who has been entrusted with the supervision of them in lodgings, and such inspection should take place under favourable circumstances as regards light, space, shelter, and freedom from confusion.

(*d.*) These inspections should include all emigrants whether in short ships or otherwise.

(*e.*) Emigrants detained at ports of debarkation, or in any lodging-house or depôt, or removed from ships on account of suspected infection,

should be kept under observation with proper precautions respecting them, until the nature of the disease is declared.

(3.) *As to lodging-houses :—*

The depôt system offers such considerable advantages that it is desirable it should be generally adopted. At the same time there are undoubtedly practical difficulties in the way of carrying this out, such as the fluctuating character of the trade, the immense number of passengers, and the number of shipping companies engaged. Still, I think it feasible, and an effort should be made to bring it about. But whether the depôt system be adopted or not every emigrant lodging-house should be provided with rooms, in which cases of illness suspected to be of an infectious nature can at once be isolated; and scrupulous care should be taken to insure all such houses being kept in a thoroughly sanitary condition.

(4.) *As to precautionary measures on board ship :—*

It is important (*a*) that infectious hospitals should be provided on the weather deck in the least frequented part of the ship.

(*b.*) That the surgeons should be instructed to make daily inspection of emigrants during the voyage, and to secure the immediate isolation of cases presenting suspicious symptoms.

(*c.*) That record should be kept of the particulars of all cases of infectious disease that come under treatment, including any deaths that may occur during the voyage.

(*d.*) That immigrants, *i.e.*, persons embarking for the United Kingdom, should be subjected to medical inspection by the surgeon of the ship at the time of embarkation.

(5.) *As to cattle ships :—*

A week at least should elapse between the landing of cattle from a ship, and the use of the ship for emigrants. The ship meanwhile should be thoroughly cleansed to the satisfaction of the port sanitary authority.

(6.) *As to ships' crews :—*

Shipping companies should take steps to secure the re-vaccination of their officers and men, making it a condition of service. The surgeons of the ships should be required to make special report to the shipping companies as to compliance with this regulation.

(7.) *As to coastwise vessels :—*

Steps should be taken to insure coastwise vessels leaving port free of infectious disease, and to establish a uniform system of inspection of vessels in harbour throughout the United Kingdom to insure their being kept in a wholesome condition.

No. 15.

MEMORANDA, prepared with the assistance of Dr. PARSONS, on the CIRCUMSTANCES under which the CLOSING of PUBLIC ELEMENTARY SCHOOLS or the EXCLUSION therefrom of particular CHILDREN may be required in order to prevent the SPREAD of DISEASE.

1. It is attempted in these notes to bring together the information in the possession of the Local Government Board, derived from the reports of the Board's own Medical Inspectors and of local Medical Officers of Health, respecting school-closure and exclusion from school as precautions against infection. It is sought to indicate the best means of preventing the spread of disease by school children among their fellows, while avoiding any unnecessary interruption of the work of education.

2. In the Code of Regulations approved by the Lords of the Committee of Council on Education on the 6th March 1882, the following Article (Art. 98) prescribes as one of the general conditions required to be fulfilled by a Public Elementary School in order to obtain an annual Parliamentary grant, that

"The Managers must comply with any notice of the sanitary authority of the district in which the school is situated, requiring them for a specified time, with a view to preventing the spread of disease, either to close the school or to exclude any scholars from attendance, subject to an appeal to the Department, if the managers consider the notice to be unreasonable."

To facilitate compliance with this Article, certain other provisions are made (Arts. 94, 95, 102).

Article (96 (*a*)) is also of importance in connexion with questions of disease prevention.

The Education Department must be satisfied "that the school "premises are healthy, well lighted, warmed, drained, and ventilated, "properly furnished and supplied with suitable offices, and contain "sufficient accommodation for the scholars attending the school.

"N.B.—In administering this article the Department will endeavour to secure at least 80 cubic feet of internal space and 8 square feet of internal area for each unit of average attendance; . . . . ."

3. The diseases for the prevention of which school closure, or the exclusion of particular children, will be required are principally those which spread by infection directly from person to person, such as scarlet fever, measles, diphtheria, whooping-cough, small-pox, and rötheln, the order in which the several diseases are here given being about that of the relative frequency with which their occurrence gives rise to these questions at schools. More rarely, the same questions arise in connexion with enteric fever and diarrhœal diseases which spread not so much by direct infection from person to person as indirectly through the agency of local unsanitary conditions, such as infected school privies.

A further and peculiar relation between school and infection is suggested by Mr. Power's recent report on diphtheria at Pirbright (see page 52 of the present volume) but this does not need consideration for the immediate purposes of these memoranda.

4. It will be seen that Article 98 quoted above confers upon sanitary authorities an alternative power with respect to public elementary schools,

(*a*.) To require the school to be closed for a specified time, or

(*b*.) To cause particular scholars to be for a specified time excluded from attendance.

5. It will be convenient *first* to consider the circumstances under which the requirements of the public health for preventing the spread of disease will be satisfied by the less severe measure of the *exclusion from* school of particular children.

It may be laid down as a universal principle that all children suffering from any dangerous infectious disorder (*i.e.* of a nature dangerous to some of the persons attacked by it, however mild in other cases) should be excluded from school until there is reason to believe that they have ceased to be in an infectious condition (see Section 126 of the Public Health Act, 1875.)

Furthermore, as it is rarely possible to provide effectual isolation of the sick from the healthy within the homes of children of the class attending public elementary schools, it must commonly be necessary that all children of an infected household should be excluded from school; first, because otherwise such children might attend school while suffering from the disease in a latent form, or at an unrecognised stage, and, secondly, because it is known that infection may attach itself to, and be conveyed by, the clothes of a person living in an infected atmosphere, even though the person himself remain unaffected. The same considerations will sometimes make it desirable to prohibit the attendance at school of all children from a particular street or hamlet.

In the case of infectious diseases involving little or no danger to life, such as mumps or skin diseases, school interests may be more particularly considered in determining the exclusion of scholars. In such case, however, the rule of prohibiting the attendance of every child while in an infectious state will commonly prove to be the right one; for if disease should spread to other scholars owing to the continuance of an infected child at the school, there will be greater ultimate loss of attendance with corresponding loss of credit to the school.

6. The Medical Officer of Health, on becoming aware of the presence of dangerous infectious disease in his district, should send immediate notice to the teacher of the school or schools which the children of infected households may be attending, requesting that such children may be excluded from school for such time as he (the Medical Officer of Health) may specify as being necessary. (*See* Articles 2 (7) and 18 (6) of the Board's General Orders prescribing the duties of Medical Officers of Health).

Frequently, the school attendance officer or the schoolmaster himself will obtain the earliest information of the occurrence of infectious disease among scholars, and it is most desirable that such officer or master should without delay communicate the facts to the medical officer of health. Absence of any child from school on the plea that it is suffering under one of the before-mentioned diseases, and absence of several children of one family from school at the same time, no matter what name be given to the complaint that keeps them at home, should be reported to the health officer. In practice it has been found that this notification of absentees has materially aided the local health officer in taking measures for the suppression of infectious disease, to the advantage alike of the district and of the school. Furthermore, schoolmasters may properly be asked to take note, especially when an epidemic threatens or is present, of symptoms occurring in any of their scholars that may indicate the commencement of disease, febrile in nature. Such symptoms are shivering, headache, and languor, especially if commencing suddenly, vomiting, rashes on the skin, and sore throat.

When scarlet fever or diphtheria is about, every trace of sore throat should be looked upon as suspicious. In any case where such symptoms are observed, the safest course will be to exclude the child from school until assurance can be had that it may attend school without harm to itself or danger to other scholars.

7. The time to be specified, during which the exclusion from school of particular children is to last, will vary in different diseases and different cases, and in this matter the sanitary authority will doubtless be guided by the advice of their Medical Officer of Health, who may properly be entrusted with some general duty of acting for the authority in this subject-matter.

Medical officers of health, having to specify a time during which any scholars are to be excluded from attendance at any school, should have regard as far as practicable to the circumstances of the particular scholars suffering from infectious disease or living in infected households. Not only the nature of the infection and the length of illness, but the environments of the individual as affecting the retention of infection will deserve consideration. The period of exclusion for example will need to be different according to the conditions of a patient's lodgment, according to the sufficiency of the separation that can be effected between a patient and excluded scholars, and according to the opportunities of effectual disinfection that can be afforded to the household. Thus a hard-and-fast rule, such as has been laid down in some districts where scarlatina has been present, that no child shall go to school from an infected house for three months after the disease has begun in that house, is not to be commended. It is indeed possible that under the circumstances of a particular household, a child convalescent from scarlatina or living in the same house with convalescents should not in the interests of other children be permitted to return to school until after so long a period as this; but the same ought not to be assumed of all households in the district that may be invaded by scarlatina. The better plan would be for the sanitary authority to secure, during a shorter period, the exclusion of individual sick persons and their housemates from school; and when that period is about to expire to cause fresh inquiry to be made as to the expediency of further exclusion and, if found requisite in particular cases, to cause fresh notice to be given to the school managers.

8. *Secondly*, as to the *closing of schools*. This, by more seriously interfering with the educational work of a district, is a much more grave step for a sanitary authority to take than to direct the exclusion of particular scholars. It is a step that seldom ought to be enforced, except in presence of an actual epidemic, nor even then as a matter of routine nor unless there be a clear prospect of preventing the propagation of disease, such as could not be looked for from less comprehensive action.

The mere fact that in an epidemic many of the sufferers are school children does not necessarily show that the disease was caught at school; but the school may with probability be regarded as spreading infection if in a large majority of households attacked the first case be a child attending school; and with still greater probability if a number of children living at a distance from one another, and with no circumstances in common, except that they attend the same school, should be simultaneously attacked, and if it can be ascertained that a child or teacher in an infectious state has actually been attending the school.

9. In deciding whether an outbreak of infectious disease among children of school age may be best combated by closing the school, or

whether it will suffice to exclude the children of infected households, the two most important points to be considered are :—

(*a.*) The completeness and promptness of the information received by the officers of the sanitary authority respecting the occurrence of infectious cases.

(*b.*) The opportunities which exist for intercourse between the children of different households elsewhere than at school.

10. (*a.*) The more prompt and full the knowledge of cases of infectious disease that the sanitary authority are able to obtain, the better will be the prospect of checking such disease by keeping away from school the children of infected households, and the less will be the necessity for closing schools. If the cases be few in number, and their origin known, the exclusion from school of the children of infected households will probably suffice, but this measure will fail where there are many undiscovered or unrecognised cases, or where the known centres of infection are peculiarly numerous.

Commonly, the failure of carefully considered measures of exclusion to stay the spread of an epidemic which shows a special incidence upon school children, may be regarded as pointing to the continued attendance at school of children with the prevalent disease in a mild or unrecognised form, and a strong case will appear for the closing of schools.

If by reason of the absence or exclusion of a large number of children, the attendance at a school be greatly reduced, it may be found better to close it altogether. This is especially apt to occur in the case of epidemics of measles, a disease which is very infectious in the early stages, before the characteristic rash has appeared, and while the symptoms are only those of a common cold.

> In a village where a medical practitioner purposely concealed the existence of scarlatina among his patients, the exclusion from school of children living in those houses that the sanitary authority knew to be infected failed to check the prevalence of the disease, but it began to decline as soon as the schools were closed.

11. (*b.*) The second material consideration, in deciding as to the desirability of closing schools during the prevalence of infectious disease, is the amount of opportunity for intercommunication between the members of different households elsewhere than at school. In sparsely populated rural districts, where the children of different households, or of separate hamlets rarely meet except at, or on their way to, the village school, the closing of the school is likely to be effectual in checking the spread of disease. It is less likely to be useful in a town or compact village (particularly where houses are sub-let and yards are in common), where the children of different households, when not at school, spend their time in playing together, and often run in and out of each other's houses. In some such places the closing of schools has even appeared to do harm rather than good.

In rural districts, where epidemic diseases are less frequently prevalent, school managers may more fairly be asked to close their schools ; as an exceptional measure to meet an exceptional state of things. As regards more populous places, it must not be forgotten that if schools were to be closed whenever an infectious disease was prevalent, there are many places where schools would hardly ever be open.

12. It will sometimes be necessary to close a school for a day or two to allow of the rectification of sanitary defects of a nature to extend disease, or in order that the school may be disinfected or purified. It has happened that infectious sickness in the master's family has forbidden the attendance of scholars. These more temporary and

occasional closures of schools are contemplated in the before-quoted section of the Education Code, and are to be regarded as having a real importance of their own.

Formal processes of cleansing and disinfection will be especially wanted if children in an infectious condition have actually been attending school. It is to be desired that the details of them should be defined by the Medical Officer of Health, at whose instance they are taken, and that they should be executed to his satisfaction.

As a precautionary measure, during the prevalence of an epidemic the fumigation of the schoolroom every week by burning sulphur may be recommended, and may usually be done on Saturdays without interruption of school duties.

As regards enteric fever and other diseases attended with diarrhœa, it is not to be forgotten that such diseases can spread through school privies that have become infected by the discharges of a commencing or unrecognized case. When such diseases are prevalent, school privies should be frequently emptied and cleansed, and such disinfectant as the Medical Officer of Health may advise should be applied to them according to his instructions and in liberal quantity.

The sanitary defects of schools, likely to assist in the propagation of disease, are most usually found to be uncleanly condition, want of ventilation, untrapped waste pipes from lavatories, bad construction, bad position, or foul condition of closets. Ventilation is a matter so important in the present connexion that it may be well to note here that every schoolroom should be adequately furnished with means of ventilation of two kinds, viz., (*a*) apertures for the supply, during school time, of a steady volume of air without draughts; and (*b*) windows made to open on two sides of the room so that the whole aërial contents of the room may be thoroughly changed in the intervals between school hours.

The principles to be held in view in the construction of school privies are set forth in a memorandum, prepared in this department for the use of the Committee of Council on Education, entitled, "Practical Suggestions as to the Construction and Cleansing of School Offices."

A supply of wholesome water should be secured to every school. Epidemics at schools have been traced to the drinking of contaminated water furnished from school wells or obtained from neighbouring sources.

In places where children have to come from a distance, and do not go home for their midday meal, a room should be open for their use during the interval between morning and afternoon school, or they will seek shelter where they can,—perhaps in infected houses.

13. In places where there are several public elementary schools, if an outbreak of infectious disease be confined to the scholars of one particular school, it may be sufficient to close that school only. But where different schools have all appeared to aid in the spread of disease (though perhaps to an unequal extent) the sanitary authority may consider it advisable that all should be closed, not only for the sake of appearing to deal with all impartially, but also lest children in an infectious state who previously attended the schools that are closed, should be sent to others that might remain open.

It must be remembered that sanitary authorities have no power in respect of Sunday schools, or dames' or other private schools; except in so far as these may contravene sect. 91 (5.), sect. 126

or other provision of the Public Health Act; and the closing of Public Elementary Schools may tend to undue crowding in dames' schools.

14. Notices of the sanitary authority for the closing of Public Elementary Schools should be made in writing to the managers, and should state the grounds on which the closing is deemed necessary.

All such notices should specify a definite time during which the school is to remain closed; this should be as short a period as can be regarded as sufficing on sanitary grounds; a second notice may be given before the expiration of the first, if it should be found necessary to postpone the re-opening of a school. The managers of schools have an appeal to the Education Department, if they consider any notice to be unreasonable.

15. In conclusion two general observations may be made.

First, that in proportion as the sanitary authority have performed their own proper work for the protection of their district from infectious diseases,—as they have secured early information of the occurrence of cases; as they have provided accommodation for the isolation of such cases; and arranged for keeping patients under supervision until their infectious condition has ceased; and as they have provided for the subsequent disinfection of infected houses and things,—the more successfully will they be able to deal with such diseases when they occur, without the serious interference with the business of popular education involved in the compulsory closing of schools.

Secondly, that the proper work of schools is facilitated and the credit of the school is promoted by every measure which hinders the spread of infection. Wherefore it is entirely in the interests of school managers themselves to trust the skilled judgment of sanitary authorities, and to aid their endeavours to maintain the public health.

APPENDIX B.

No. 1.

FURTHER REPORT on the RELATION of PATHOGENIC to SEPTIC BACTERIA as illustrated by OBSERVATIONS on BACILLUS ANTHRACIS; by E. KLEIN, M.D., F.R.S.

In my Report for 1881 I have pointed out, that artificial cultivations of bacillus anthracis, not containing any spores, after from several days to a few weeks lose the power to infect white mice with anthrax, but retain their full power on guinea-pigs and rabbits. And this power on the last-named animals is retained as long as there exist in the culture living non-degenerated bacilli. The white mice not affected by such cultivations, as I have also pointed out, have no general refractory power against anthrax or bacillus anthracis, and do not obtain by these unsuccessful inoculations any kind of immunity against active cultures.

These results were not quite in accordance with the general statements of M. Pasteur.

I was anxious to test these cultivations on sheep, knowing from M. Pasteur's observations that his artificial cultivations leave sheep without disease but with immunity, and it seemed to me desirable to ascertain whether the above cultivations were effective in the sheep, or whether they were without result on that animal, as they are on white mice.

On April 19th I inoculated one healthy sheep (No. 1) with a few drops of an artificial cultivation (the fifth transfer from mouse's blood bacillus) of bacillus anthracis in fluid alkaline pork broth. This cultivation had been established on April 8, and was used on April 17 for two white mice and one guinea-pig.

The guinea-pig was dead within 48 hours, the mice remained well and lively.*

The cultivation when used contained numbers of isolated bacilli, and of threads of them, many showing the process of degeneration described in my former Report, *i.e.*, granular degeneration and dissolution; others were, however, perfect.

The sheep remained perfectly well. Its temperature remained normal, it fed well, and was otherwise quite healthy.

After the lapse of two days it was inoculated again with the same cultivation. At the same time two guinea-pigs were inoculated with it. The sheep received about half a Pravaz syringe, the guinea-pigs only a few drops.

The guinea-pigs remained perfectly well for the next eight days. The sheep, however, showed a tremendous rise of temperature, from 39°·2 C. to 41°·6 C. on the third day after the fresh inoculation; in the evening of the third day the temperature rose to 42°·2. On the fourth day it fell to 41°·4 in the morning, then to 40°·4 in the evening; on the fifth day it fell further in the morning to 40°·2; but rose again in the evening to 41°·4. On the sixth day it was at 41° in the morning, at 42·2° in the evening. The animal died in the night.

It fed tolerably well till the sixth day, when it ceased to ruminate. But it was always dull while the temperature was above 40°.

* The fluid is introduced by means of a capillary pipette far into the subcutaneous tissue of the groin, in the same manner that I generally use, and as has been mentioned in my first Report (Report of Medical Officers to Local Government Board for 1881, p. 191).

P.M.—Liver excessively pale, firm, and small; shows distinct chronic cirrhosis. Spleen small, very brittle. Lungs much inflamed, numerous minute extravasations on the pleura. Examining the spleen under the microscope, it is found to contain vast numbers of bacilli anthracis, some of unusual length, being long threads, such as are only known to occur in artificial cultivations. They were aggregated in convolutions in the splenic vessels.

This condition of the bacilli is, I presume, explained by the fact that the disease lasted comparatively long (six days being an unusually long time), and therefore the bacilli had time to form the threads. It is an extraordinary fact that the spleen did not show conspicuous enlargement. The blood of this sheep contained numerous bacilli anthracis. Inoculated with it one guinea-pig. This animal was found dead of typical anthrax on the fifth day.

[An interesting fact is brought out by this series of experiments. It is this: the cultivation used for the inoculation of the sheep and for that of two guinea-pigs contained, as was stated above, a great many bacilli in a state of degeneration, and consequently when used in a small quantity, the chances are that the result will be negative; such was the case in the first inoculation of the sheep and in the inoculation of the two last guinea-pigs. But when using larger quantities, the chance of escape from the good or perfect bacilli was small or nil, and such was the case in the second inoculation of the sheep. These facts are in complete harmony with the observations described in my first Report, p. 199.*]

The sheep being unaffected by the cultivation in the first instance, but affected fatally by the same cultivation in the second inoculation, sets aside, of course, the question of any immunity that might have been supposed to have been conferred on it by the first inoculation.

Inoculated a second healthy sheep (No. II.) on May 8 with an artificial cultivation of bacillus anthracis (first remove from guinea-pigs' blood) established on April 13, *i.e.*, 25 days old. This cultivation had lost by this time its power to affect white mice, but proved fatal to guinea-pigs, as was ascertained by direct experiment.

On May 10 the sheep is ill, temperature 41° C.; the animal does not feed well, does not ruminate either; respiration laboured. Examined the blood, but found no bacilli in it.

On May 11 the animal seems a little better, feeds and ruminates, but temperature is high, 41° C. Examined the blood, but found no bacilli in it.

The animal died in the evening of May 11. Typical anthrax was found at the post-mortem examination.

In these two cases, then, we have proof that a cultivation that had lost its effect on white mice, nevertheless possesses fatal action on sheep in the same way as on guinea-pigs.

The next question I asked myself was this: is it generally true, as M. Pasteur says, that bacillus anthracis growing at 42° C. loses its virulent effect?

From a 17th cultivation of bacillus anthracis originally derived from guinea-pig dead of inoculated anthrax, I established on May 24 two cultivations in neutral fluid pork broth, one was kept at 42° C., the other

* In the case of the two guinea-pigs the inoculation was effected with the same cultivation as in the first guinea-pig, but with this difference, that it was two days older; and according to repeated observation such a short time does not make any experimentally appreciable difference in the virulence of a cultivation on guinea-pigs, other things being the same.

at 22° C. According to M. Pasteur's statements the fluid that had grown at a temperature of 42° C. ought to have had no fatal effect; it, nevertheless, proved to be very virulent when inoculated into guinea-pigs and mice, while the other, grown at 22° C., did not prove fatal when used after some time on white mice.

The results of the experiments with these two fluids are very striking, and illustrate in a very marked manner the erroneousness of M. Pasteur's general statement.

Three white mice were inoculated with the above cultivation that had been grown for nine days at a temperature of 42° C. All three died of typical anthrax: two after three days, the third after five days.

With the other cultivation, established in the same way and at the same time as the above, but kept for the same period at 22° C., inoculated in exactly the same manner as the above mice three other white mice. These remained perfectly well.

It has, however, occurred to me to have cultivations of bacillus anthracis grown at 42° C. which had no effect on guinea-pigs; these cultivations were made of anthrax blood of sheep, were kept at 42°–43° C. for 15 days, and when inoculated into two guinea-pigs proved without the slightest effect. In this case I could not start a new cultivation with that culture, and the microscopical examination revealed only the presence of granular matter and of multitudes of degenerated threads of bacillus anthracis. The two guinea-pigs were subsequently inoculated with some active cultivation and succumbed promptly with typical anthrax. These observations are in harmony with the observations of my former Report with reference to the loss of activity of a culture due to progressive degeneration of the bacilli.

So much for guinea-pigs and mice; but how do sheep behave towards a cultivation of bacillus anthracis grown at 42° C.?

The same cultivation as used above (*i.e.*, that grown at 42° C.) was inoculated on June 23 into two healthy sheep, III. and IV.

At the same time two other sheep, V. and VI., were inoculated with the cultivation grown at 22° C. as above; and for the sake of further comparison two sheep, VII. and VIII., were inoculated with blood of spleen of a mouse that had died of (inoculated) anthrax. This blood was full of the bacillus anthracis.

All six sheep showed febrile rise of temperature and constitutional disturbance.*

The temperature of these animals before experiment ( ), and on the evening of the several days after experiment, was as follows:—

Sheep No. III.	(39°·0)	June 23	39·4
		„ 24	39·6
		„ 25	41·
Sheep No. IV.	(39°·2)	June 23	39·8
		„ 24	39·8
		„ 25	41·6
		„ 26	41·8
Sheep No. V.	(39°·2)	June 23	39·4
		„ 24	39·8
		„ 25	40·2

* These and some of the further experiments on sheep were made at my suggestion and under my direction by Professor Roy and Mr. Batt at the Brown Institution.

Sheep No. VI. (40°·0)	June 23	40·2
	„ 24	41·2
	„ 25	41·
	„ 26	40·2
Sheep No. VII. (39°·4)	June 23	39·2
	„ 24	39·8
	„ 25	40·
	„ 26	40·4
Sheep No. VIII. (39°·8)	June 23	39·4
	„ 24	40·6
	„ 25	39·6
	„ 26	39·6

Of these sheep No. III. died on June 26, *i.e.* after three days; No. IV. died on June 28, *i.e.* after five days. In both instances the post-mortem examination showed typical anthrax.

In both instances there was slight œdema at the seat of the inoculation. The internal organs showed the typical appearances of anthrax. Spleen of No. III. was enlarged and full of bacilli, but the spleen of No. IV. contained only very few bacilli.

Sheep No. V. died on June 26, *i.e.*, after three days, but sheep No. VI. recovered completely.

Sheep No. VII. and VIII. recovered completely.

Thus we see that while both sheep inoculated with cultivated bacillus anthracis grown at 42° C. succumbed, only one died after the inoculation with cultivated bacillus anthracis grown at 22° C., whereas both sheep inoculated with mouse's blood (anthrax) recovered.

The three sheep Nos. VI., VII., and VIII., having had rise of temperature and constitutional disturbance in consequence of the inoculation, were now used to test the question, whether they were immune against further inoculation with virulent material. Consequently the following inoculations were performed on July 1:—

Sheep No. VI. was inoculated again with the same cultivation as was used to it the first time, *i.e.*, grown at 22° C.

Sheep No. VII. and VIII. were inoculated with blood full of bacillus anthracis of a guinea-pig that had died of anthrax.

They remained all right until July 13.

They were then again inoculated with virulent spores of bacillus anthracis; one guinea-pig inoculated at the same time. The guinea-pig was dead within 48 hours; the sheep remained well. The three sheep were again inoculated on July 26 with bacillus anthracis of spleen of sheep dead of inoculated anthrax (*see* below). They remained well. They were again inoculated on October 4, but remained well.

The fact that the two sheep (VII. and VIII.) withstood the effect of the first inoculation with anthrax bacillus of blood of mouse suggested the possibility that sheep as a rule might not be fatally affected by blood of mouse or guinea-pig, but that in the event of their showing sufficient constitutional disturbance might be hereby made immune against further attack by anthrax. Consequently the following experiments were made:—

Two healthy sheep, IX. and X., were inoculated on July 24 with blood of spleen of a guinea-pig dead of anthrax. Both animals were

dead in the night of July 25. The post-mortem examination showed typical anthrax. Spleen much enlarged and full of bacilli anthracis.*

Thus, hereby, the question of the fatal effect of guinea-pig's anthrax blood was settled. Now, how about mouse's anthrax blood? To solve this question the following experiments were made:—

Sheep Nos. XI., XII., and XIII. were inoculated on October 14 with fresh blood of a mouse dead of anthrax for a few hours. They showed rise of temperature for the following three days, but always fed well and ruminated. They had quite recovered on October 18.

On November 2 inoculated the same three sheep and a guinea-pig with spore-containing cultivation of bacillus anthracis; the guinea-pig was dead after three days of typical anthrax. The sheep remained well.

Thus we see that mouse's anthrax blood while affecting constitutionally the sheep did not produce fatal effect and at the same time furnished them with immunity against further inoculation with virulent material.

The experiments detailed in the preceding made it desirable to ascertain the precise manner in which Pasteur's "vaccin" operated on the various animals. Since I have not been able to obtain by cultivation of the bacillus anthracis at 42°–43° C. as stated by Pasteur, a fluid that possesses the character of a vaccine, and since M. Pasteur has not published the details of the method by which he obtained his vaccine, and further, since several of his statements could not be substantiated, I began, not of course to doubt the accuracy of his account and result of vaccination with vaccin charbonneux of sheep and cattle in France and elsewhere, but to question his statement as to the universal applicability of his results, and as to the effects of his vaccine in protecting other animals.

I proceed now to describe the experiments which I made with M. Pasteur's "vaccin charbonneux," that is to say, cultivations of bacillus anthracis made in M. Pasteur's laboratory, and which cultures are said to have the power to affect the animals inoculated with them in a manner that would make them only imperceptibly ill, but nevertheless, would give them immunity against further inoculations with any—the most virulent—anthrax material. As is well known, this "vaccin charbonneux" is manufactured in large quantities in the laboratory of M. Pasteur, and is sold by his agent, M. Boutroux, in Paris. It is sold for 20 francs per two tubes "vaccin premier" and "vaccin deuxième," each containing a clear fluid with a minute quantity of a powdery precipitate; the fluid is said to be sufficient for the inoculation of 100 sheep or 50 cattle. According to the printed directions, the premier vaccin is inoculated first, after the lapse of about a fortnight the deuxième vaccin is used, and then the animals are supposed to be immune against any further inoculation with anthrax. No constitutional disturbance is said to be observable in the animals during or after the experiment.

I obtained, through M. Boutroux, two lots of this "vaccin," each lot consisting of a tube of premier and deuxième vaccin, and I at once started a series of experiments with it.

From M. Pasteur's address before the International Medical Congress in London 1881, reprinted from the Transactions of the International Medical Congress Vol. I., and circulated at the instance of the Local Government Board, and from M. Pasteur's statements in other places,

* These experiments were also made at my suggestion by Professor Roy and Mr. Batt.

everyone had understood that this "vaccin charbonneux" knows no difference of species, breed, or country; that it confers its salutary powers on all alike.

I now proceed to give here the details of my experiments, and the reader will be able to judge for himself whether some limitations to this general belief are not required.

First Lot.—On July 17, opened a tube of premier vaccin, and inoculated with its fluid:—

(*a.*) Two guinea-pigs.
(*b.*) Two healthy sheep, Nos. XIV. and XV.
(*c.*) Five mice.

The animals showed no change, except one mouse that was found dead on July 28 of anthrax.

On July 29 opened a tube of deuxième vaccin and inoculated with it:—

(*a.*) The two guinea-pigs as above, and
(*b.*) The two sheep, Nos. XIV. and XV.

The two guinea-pigs were dead on August 1 of typical anthrax. The premier vaccin had not availed to save them from death by the deuxième vaccin.

With blood of spleen of one of these guinea-pigs, inoculated the four mice (*c*) left of premier vaccin.

These four mice were dead within 48 hours of typical anthrax, so that those which escaped death by the premier vaccin did not receive from it any immunity against the active material of anthrax.

The two sheep showed slight rise in temperature but soon recovered.

These two sheep were inoculated on August 5 with cultivations of bacillus anthracis grown at 42° C. for about 21 days. There were present in this culture large numbers of degenerated bacillus threads, but also some few good bacilli.

[Inoculated at the same time with very minute quantity of it one guinea-pig. This guinea-pig showed on August 7 slight œdema at seat of inoculation, but otherwise seemed all right. Inoculated it again with same material. It was dead with typical anthrax within 48 hours.]

The two sheep showed on August 7 rise of temperature, much swelling and œdema about the place of inoculation. Next day, *i.e.*, August 8, they were found dead of typical anthrax.

We see, then, further that also sheep, although they were slightly affected by the deuxième vaccin, succumbed to the inoculation with a culture grown at 42° C.; that is to say, not only were they not made immune by the inoculation with Pasteur's two vaccines, but they were killed by a culture which, having been grown at 42° C., ought, according to Pasteur, to be ineffectual to kill an ordinary sheep not specially prepared by his vaccin charbonneux.

This represents the first series of experiments undertaken to test Pasteur's general statements with reference to the vaccin charbonneux.

Second lot of the vaccin charbonneux. I then commenced experimenting with this as follows:—

Inoculated with fresh vaccin premier*:—

(*a.*) Nine guinea-pigs.
(*b.*) Six mice.

* It is very remarkable that those inoculated at the same time, the same place, in the same manner, with about the same quantity of precisely the same material, died at periods so very different.

Of these mice five died of typical anthrax :—
One after two days.
One after three days.
One after five days.
Two after six days.

Of the guinea-pigs, six died after three days, the others remained unaffected.

Opened fresh deuxième vaccin and inoculated with it :—
(*a.*) The three guinea-pigs left of premier vaccin.
(*b.*) The one mouse left of premier vaccin.
(*c.*) Six fresh mice.
(*d.*) Four fresh guinea-pigs.
Of these mice all died of typical anthrax.
Of the guinea-pigs six died; one of the fresh lot (*d*) remained unaffected for three weeks.
This one guinea-pig was then inoculated with an artificial cultivation of bacillus anthracis; it died of typical anthrax after two days.

Having thus tested the efficacy of the vaccin charbonneux,* and having found it altogether different from what it was represented to be by M. Pasteur in his address to the International Medical Congress, I wished to ascertain what this vaccin charbonneux really contained. I therefore made the following experiments :—

Immediately on opening of the premier vaccin charbonneux of the first lot, I withdrew a small quantity and inoculated with a droplet of it (under the same safe conditions that I do successive inoculations of culture fluid) several test tubes with sterilized pork broth, and several flasks with mixture of gelatine and pork broth, as used in my former experiments (see the Report for 1881).

These test tubes and flasks were placed in an incubator, and some were kept at a temperature of 42° C., others at 32° C.

[The vaccin premier was at the same time examined afresh microscopically; it contained very numerous minute bright particles that did not look unlike spores, but most of them were probably mineral particles.]

All test tubes and flasks were found after 24 hours turbid and full of micrococci, in dumbbells and chains. A few days later there appeared in addition thin bacilli, which formed a thick scum on the surface, here were also numerous spores in them. The bacilli did not look at all like anthrax bacilli.

All test tubes (eight in number), and the flasks (three) showed the same appearances, and this of course proves undeniably that these organisms that developed in them were introduced by the vaccin charbonneux, and not by accidental contamination.

My inoculations were done after the same plan that I practised so often before, and that I described on p. 180 of the Reports of Medical Officer for 1881, so that I am quite confident that the above organisms in the cultivations were not introduced accidentally during the process of inoculation. So much for the purity of this vaccin charbonneux.

By inoculating guinea-pigs with these cultures, *absolutely no effect* was produced, nor were these animals made hereby in any way immune against further inoculation with cultures of real anthrax bacillus. Of this I have convinced myself sufficiently to speak with absolute certainty.

* I still now (1883) possess the remains of the vaccin charbonneux employed in the above experiments, and I use it with good results whenever I wish to produce fatal anthrax in rodents.

I do not mean hereby to say that the vaccin charbonneux did not contain the bacillus anthracis or its spores; on the contrary I knew by experiment, *i.e.*, by the inoculation made with it in mice and guinea-pigs, that this particular vaccine premier did contain them, for I killed several animals with it; but what I mean to say is, that this vaccin charbonneux was contaminated to a large degree with micrococcus and another bacillus.

Inoculated with Pasteur's deuxième vaccin several test tubes with pork broth.

After three days the surface was covered with a thick white scum of a thin bacillus, and bacillus threads, and in them numerous spores.

Inoculated with a considerable quantity of these bacilli two guinea-pigs.

They remained perfectly well. After one week inoculated them again with same material.

They remained perfectly well.

Inoculated them with a cultivation of bacillus anthracis. They were both dead of typical anthrax within three days.

Inoculated with premier vaccin charbonneux of a second lot several test tubes of pork broth.

After two days there was present on the surface a thick white scum of a thin bacillus and its threads, with many spores in them.

Inoculated with considerable quantities of this growth two guinea-pigs. They remained perfectly well. Inoculated them after six days with a culture of bacillus anthracis kept growing at 42–43° C. for 15 days. This culture contained only degenerated threads of bacillus anthracis. This inoculation had absolutely no ill effect on the two animals.

After three weeks inoculated them again with fresh culture of bacillus anthracis. They were both dead of typical anthrax within two days. Thus we see that neither the culture produced with M. Pasteur's vaccin charbonneux, nor a culture of bacillus anthracis produced after M. Pasteur, *i.e.*, grown at 42–43°, had any protective influence on these animals, since they both promptly succumbed to an active culture of bacillus anthracis.

These experiments sufficiently satisfied me that M. Pasteur's assertion, to the effect that a vaccin charbonneux gives again origin to a crop of the mitigated and modified bacillus anthracis, and that animals thus treated are protected against further attack by bacillus anthracis, is not borne out by actual observation.

With regard to the scum-forming bacillus that appeared in the above cultivation, there is every a priori probability of its having no connexion whatever with the bacillus anthracis or its spores present in the vaccin charbonneux with which the cultivation had been inoculated. How can one for a moment suppose that the bacillus anthracis would by a single transfer assume altogether so different morphological characters —greater thinness, formation of scum, &c.—and would at once lose all its physiological power? Even Dr. Hans Buchner, who, as is well known, is very enthusiastic about the change of non-pathogenic into pathogenic bacillus, would consider such a sudden leap as evidence against the transformation.

A question of importance that presented itself several times in the course of this inquiry was this: Is a cultivation in which in course of time the bacillus anthracis, at first forming a copious growth, degenerates and in which no spores had been formed, and further which cultivation loses as we know its power to infect with virulent anthrax animals

when inoculated, is such a cultivation, I say, perfectly ineffective in giving the animals some sort of immunity against further inoculation with virulent material? The answer is simply, yes, it is perfectly ineffective. In several instances I have had guinea-pigs inoculated repeatedly with cultures in which the threads of the bacillus anthracis had become degenerated, large numbers of their sheaths and large amount of granular matter being present, but no effect was produced. The animals were soon after (from several days to several weeks) inoculated with fresh cultures of anthrax bacillus or with blood of an animal dead of anthrax, and invariably and promptly succumbed to fatal anthrax.

In my last Report I have described a peculiar torula-like modification of the bacillus appearing in some of my cultures. I have been able to get copious growths of this torula-like modification by sowing bacillus anthracis of a culture on the mixture of gelatine and pork-broth used in former experiments and by keeping the tubes at the temperature of the room 15–16° centigrade. In the first few weeks there is a copious growth of the torula-like cells and their chains, and these gradually change into the typical apparently smooth threads of the bacillus anthracis. I have experimented with this torula-like variety and found it just as virulent as the ordinary bacillus anthracis to mice, guinea-pigs, and rabbits.

The next question for which I sought an answer, and which, as will be seen, is one of great practical importance, was this: Knowing from cultivation experiments that bacillus anthracis when growing in the depth of a fluid is not capable of forming spores, and gradually undergoes degeneration, and knowing further, from the observations of Koch and from numerous observations of my own, that within an organ of the body of an animal dead of anthrax the bacillus anthracis is not capable of forming spores, what becomes of those multitudes of the bacillus anthracis that crowd the blood vessels in the different organs, notably the spleen, of an animal dead of anthrax? A priori, I answered this question in this sense, that the bacilli undergo degeneration, just like those of an artificial cultivation in which they do not form spores. Numerous observations have taught me that this is actually the case, viz., *that the bacilli, however numerous they are in an organ of an animal at the point of death, go on after death to degenerate till they have altogether disappeared; and consequently the organs are perfectly harmless when this degeneration has become complete.*

The observations that I made with reference to this point are these: Examining sections of organs hardened, prepared, and stained with aniline dyes after the usual methods, it is found that however fresh the organs were, however soon after death they were obtained from the animal, or even if they were obtained from an animal suffering from anthrax killed some hours before it would have naturally died of the disease, there were found always some bacilli that showed longer or shorter places where the sheath (described and figured in my previous Report) was seen to be empty, not containing any protoplasm. This condition I have minutely described in my previous Report. In well and deeply-stained specimens this condition is very striking, since the part of the bacillus where the faintly-stained transparent sheath is empty of protoplasm, contrasts very markedly with that part where the sheath contains deeply-stained protoplasm.

In some of these empty sheaths are some unstained or faintly-stained granular remnants, such as I described in my former Report in connexion with degeneration of the cultivated bacillus. Such partly empty

sheaths of bacilli I have seen in abundance in the vessels of the various organs of animals (sheep, guinea-pigs, rabbits, and white mice). I have before me sections through the liver and spleen of a sheep that died, or rather was killed in articulo mortis produced by inoculated anthrax ; the sections were made of the fresh organs and stained with Spiller's purple, and I also have specimens of blood of spleen prepared after the Weigert-Koch method ; in all these instances the number of bacilli with partially or totally empty sheaths was as great if not greater than those that were perfect.

The same experience I have made with guinea-pig's blood. I have specimens of blood of spleen of a guinea-pig that died of inoculated anthrax ; the specimens were made a few hours after death, and the greater majority of the bacilli were partially or totally empty.

Still more striking are these relations in blood taken from the spleen of an animal dead 24 hours. I have specimens of blood of spleen of a guinea-pig prepared by the Weigert-Koch method, 24 hours after the animal died of anthrax ; amongst a crowd of bacilli totally empty, or in which the sheath contained amorphous granular remnants of protoplasm, there are seen only here and there some that contained unaltered protoplasm.

There appears to be no definite rule as regards time and progress of this degeneration, but it appears to be in a relation to the general number of bacilli present, at least I have always observed that the greater the number of bacilli in the spleen in articulo mortis, the more of them have passed into a state of degeneration.

I have studied this process of degeneration in the spleen of animals dead of anthrax, guinea-pigs, rabbits, and mice, and I have invariably found that beginning with death, the proportionate number of degenerating and degenerated bacilli rapidly increases. As a rule after a week it is difficult to find a perfect bacillus, although there are many in which here and there an elementary cell, *i.e.*, a cubical mass of protoplasm is still left in the sheath. It seems to me from a comparative study that the sheaths when empty do not persist for any length of time, but altogether disappear ; this is quite in harmony with the observations I made and described in my former Report with regard to the degeneration of the bacilli in artificial cultivations.

With this process of degeneration of the bacilli in the blood and organs goes hand in hand the important fact of the gradual loss of infective power of the organs of an animal dead of anthrax. I have made a great many observations with reference to this point from its obviously great practical importance, and I have no doubt about the fact *that the blood and organs kept in an animal dead of anthrax gradually lose the power to communicate the disease by inoculation.*

This is in perfect harmony with the observations of Gerlach (Die Blutsenche der Schafe, 1876), and Bollinger (Zur Pathologie d. Milzbrandes), who found that putrefaction destroys the infectivity of the blood and organs of an animal dead of anthrax.

The experiments that I made to establish this point were the following :—

I buried in soft earth, about 1–3 feet deep, mice and guinea-pigs dead of anthrax soon after death, and unearthed them after various periods from 14 days down to five days ; took out the spleen and liver, minced them both up finely, and mixed them with a few minims of neutral saline solution, and injected this entire material into the subcutaneous tissue of several guinea-pigs. Not in one instance did I obtain death after such injections. After a few weeks these guinea-pigs were again

inoculated with active cultivations of bacillus anthracis, or with a trace of blood of an animal recently dead of anthrax; invariably death from typical anthrax followed such inoculations. These observations I have repeated over and over again, and always obtained the same results, namely, absolute loss of infective power of the organs of an animal dead of anthrax after having been buried over five or more days.

Microscopic examination proved, of course, the existence of large numbers of moving bacilli in the abdominal organs of such animals, but no bacilli that could be identified as bacillus anthracis.

I have also made comparative observations on the loss of infective power of the organs in animals dead of anthrax and left simply in the air.

The result was the same in the case of animals buried, only this must be added, that if the animal had been cut open, the fluid of the cut or the opened body exposed to the air, I have found to retain its infective power for over a week or 10 days, and this is unquestionably owing to the production of spores in the bacillus anthracis; but the parenchymatous organs lose it in the same manner as those of the unopened animals.

The loss of infective power of the organs depends on the rapidity with which putrefactive changes set in; thus, for instance, while the liver and spleen are the first to lose this power, the kidney is later, and still later are the lungs.

When in one set of experiments the spleen and liver of a buried guinea-pig, that had died of anthrax, failed to infect, after five days burying, the kidney and lungs had still retained some active bacilli, since large quantities of these materials injected, produced death in half the number of animals inoculated.

But it must be added here, that it is by no means the presence of putrefactive bacteria and bacilli that produce this loss of infective power, since in this very instance of the kidney just mentioned, there were very few putrefactive organisms present, but the comparative weakening of infective power was due to degeneration in a very large measure of the bacillus anthracis.

I have also tried to ascertain whether the bacilli in the lung of an animal dead of anthrax, and kept unopened in the air, retain their life. There being some amount of free air present in the lungs, and the capillaries of the air vesicles like other capillaries containing the bacilli, I imagined that it was quite possible that these bacilli, owing to their proximity to air, might be capable of forming spores, and thus the lung might hereby be empowered to retain its infective power; but observation did not bear this out; *the lung behaved in this respect like other organs.* In the animals that I am speaking of here, and which died of anthrax (sheep, mice, guinea-pigs, and rabbits), there were no open wounds by which air might have had access to the bacilli in the vessels, and in consequence some parts of the body might have retained infective power.

Of course from this are excepted the evacuations of such animal, like urine, muco-sanguineous discharges of throat and nose, for these spread on the ground and exposed to the air give a very excellent opportunity for the bacillus anthracis contained in them in large numbers to form spores, and thus permanently to retain its infective power.

These relations have been minutely and admirably discussed by Koch in his paper, "Aetiologie des Milzbrandes," Mittheil. aus dem Kais. Gesundheitsamte I., Berlin, 1881.

From all this, it is quite clear that there is no reason to attribute any correctness to the statement of M. Pasteur, viz., that in animals dead of anthrax and buried, the bacillus anthracis retains infective power for a long time (several years), that probably this prolonged infective power is due to the bacilli forming spores, and that these are brought up to the surface by earth-worms, and that hereby such fields become permanent localities of infection, and animals grazing here are liable to be infected with anthrax. On the contrary, direct experiment proves that an animal dead of anthrax loses this infective power within a short space of time,—in the case of small animals like guinea-pigs and mice it is already lost in five days,—the bacilli undergoing degeneration, and are not capable of forming spores within the organs.

No. 2.

Memorandum on lines of Research concerning Infection and Disinfection; by J. Burdon Sanderson, M.D., F.R.S.

App. B. No. 2. On Infection and Disinfection; by Dr. Burdon Sanderson.

Introduction.

"Uncleanliness," said Mr. Simon, in his remarkable paper on "Filth Diseases and their Prevention," which serves as the introduction to his Supplementary Report, published in 1874, "must be reckoned as "the deadliest of our present removeable causes of disease."*. To counteract the hurtful influence of filth is the chief aim of the sanitary administrator. It is therefore desirable that he should possess "some "intelligent appreciation of the ways in which filth becomes "destructive."

Opinion of Mr. Simon as to the nature and cause of the hurtfulness of filth

Mr. Simon proceeds to state, as the result of investigations which were in 1874 comparatively recent, that the hurtfulness of filth depends not on its offensiveness but on the existence in it of "morbific ferments," which he identifies with contagia—"matters which are not only not "gaseous, but, on the contrary, seem to have their essence, or an in- "separable part of it in certain solid elements which the microscope "discovers in them: in living organisms, namely, which in their "largest sizes are but very minute microscopical objects; and at their "least sizes are probably unseen, even with the miscroscope: organisms "which in virtue of their vitality are indefinitely self-multiplying "within their respective spheres of operation, and which, therefore, "as a contrast with common poisons can develop indefinitely large "ulterior effects from first doses which are indefinitely small."† He then divides contagia into two classes, namely, (1) those of which "man's body is the sole birthplace," and which "we see in case after "case multiplying their respective types with a successivity as definite and "identical as that of the highest orders of animal or vegetable life;" and (2) those which "confess a birthplace exterior to man, a birthplace "amid controllable conditions in the physical nature which is around "us, a birthplace amid the common putrefactive changes of dead "organic matter."

His classification of contagia.

Both are held to have intimate relations with filth, and it is on this consideration that the force of the emphatic statement from which we started, lies. It is in "filth" that the innate contagia find the conditions necessary for their continued life outside of the living body,—the extraneous ones, not only a soil but a cradle—not that the one more than the other can be stated in any exact sense to be the offspring of filth, but that the morbific ferments of the one class are in relation with "filth" from the very moment of their origin; whereas those which originate in diseased tissue are brought into relation with their filth environment only after their escape from their birthplace.

In the later paragraphs of the same paper the author discusses, with his accustomed perspicuity and force of language, the various means which the sanitary administrator has at his disposal for combating the particular evils which spring directly or indirectly from the disease producing faculty of filth. It is sufficient for my present purpose to state that as regards those forms of external uncleanliness which are

His opinion as to the value and scope of disinfection

* Supplementary Report, New Series, No. II., page 7.
† l.c. page 15.

the subjects of sewerage and scavenging, he attaches little value or importance to any measures excepting those of destruction and removal (in which last the prevention of accumulation is of course included), and that among the expedients which are ordinarily included under the term disinfection those only are regarded by him as valuable in which "the operations are within well defined and narrow limits," admitting that "with well circumscribed matter to work upon and with chemical "action precisely adjusted to its task we can absolutely kill any given "contagium." "In proportion as disinfection pretends to work on "indefinite quantities or in indefinite spaces it ceases to have practical "meaning." Hence the scope of disinfection seems to be practically limited to the management of individual cases of infectious disease, and the end to be chiefly kept in view in using it, that of acting on the matters discharged by each patient, whether contained in his liquid or solid excreta, or suspended in the air, so as to prevent outward spreading of his infection.

Entirely agreeing with all that has been quoted above as to the futility of general and house disinfection (meaning by the latter those "vague "chemical libations or powderings" which are habitually practised by sanitary inspectors in houses supposed to be infected), I venture to think that the destruction of solid and liquid excreta is not by any means all that can be accomplished by the application of chemical agents for the prevention of infective diseases. The innate no less than the extraneous contagia have a life history which is made up of two states of existence, alternating with or succeeding each other, one in which they vegetate more or less activity in the external environment, the other in which they have their abode in living blood or tissue, and there exercise their hurtful function. The problem of disinfection relates as closely to the latter as to the former of these states, hence the difficulties which render it so difficult to deal in any effectual way with contagia when out of relation with the living organism ought not to discourage us from attacking them either during their development within the organism or as they are entering or leaving it. After we have eliminated from our problem the futilities of house, street, and other kinds of external disinfection, there are still several important objects to be aimed at in addition to the destruction of the contagia contained in the solid and liquid discharges from the sick man's body. As regards excreta, the particulate contagia which, whether derived from respiration or not, escape by the air, are at least as potent for evil as those which are thrown off by the bowels or kidneys, although the evidence we as yet possess in respect of particular infectious diseases that such contagious particles are discharged into the atmosphere is scanty. But even the little knowledge we possess admits of sufficiently important practical application to encourage us to seek to extend it. As regards pulmonary tuberculosis the striking facts which have been lately observed as to the tuberculization of animals in rooms inhabited by consumptive persons, have suggested the possibility of danger arising from the collection of such persons in numbers under one roof in consumptive hospitals; while, as regards small-pox, the experience of Mr. Power on the prevalence of that disease in the neighbourhood of the Fulham Asylum have given occasion for seriously considering whether wards for the reception of variolous patients could not be so constructed as to insure the destruction of all living particles discharged from the bodies of the sick into the atmosphere.

The question, how to act effectually on contagia as they are entering the body so as to render them harmless, differs from the preceding in this respect, that, with the exception of the application of heat, the

means used must not be destructive but exclusively of such a nature that they can without prejudice to the human organism, be mixed with the life-maintaining tide of food and air. This consideration leads us at once and without any difficulty to a practical view of the aims we ought to place before us in this branch of the art of disinfection, and renders it possible to state very definitely in what direction present knowledge can be applied, and how to seek for an extension of it. It is clearly possible to place before oneself two purposes in the application of disinfectants in the way above indicated. We may either have in view a direct action of the disinfectant on the contagia contained in the material with which it is mixed, of such a nature as to render them innocuous, or the arrest or inhibition of their morbific action within the body. The occasions which justify the first of these motives are of rare and exceptional occurrence, for in general, common sense would prescribe not the disinfection, but the avoidance of food, air, or water known to contain contagium. In certain circumstances, however (as was so lamentably the case in the recent campaign in Egypt), the consumption of contaminated water may be unavoidable, so that a knowledge of a means of rendering such water harmless might be of inestimable value. Similarly in the much more frequently occurring case in which persons in attendance on the sick are exposed to the risk of infection through the air, the discovery of an agent capable of counteracting the infective action of such air would be of incalculable service to mankind. Such a discovery is however scarcely likely to be made until better knowledge is attained as to the arrest and inhibition of contagious action within the body.

Practical aims of disinfection.

At present our knowledge of the colytic action of chemical agents within the organism is very scanty. There is, so far as I know, no instance in which the contagium of any disease communicable from person to person, or from animal to animal can, after its introduction into the organism, be controlled or inhibited in its morbific action by introducing along with it an antagonistic drug. We can oppose the development of malarious fever by the exhibition of quinine, or that of rheumatic fever by administering salicylic acid, but we cannot prevent a person who has taken the variolous poison or that of rabies, from getting small-pox or hydrophobia. The knowledge which as yet exists on the action of contagia, and particularly of what constitute the specific differences between them, is as yet so incomplete that it is impossible to say whether the discovery of specific colytics is likely to be realised or not. Hitherto no attempt has been made to seek for such agents, but now the time seems to have arrived for initiating researches in this direction. There are at least some diseases in which the first beginnings of morbific action can be scrutinised, and the mechanism of infection traced with sufficient exactitude for the purpose. However great the difficulty may be, and however slight the chance of complete success, the task is one which those who have the guidance of sanitary administration cannot escape from; the obligation rests on the consideration that every member of the community is exposed to the attacks of those hidden enemies which we have been discussing under the term contagia. Perhaps the most important lesson which has been learnt as to the nature of these enemies from the researches of the last few years is that which is expressed in the word "specificity," meaning thereby that each particular kind of contagium has a power peculiar to itself of producing a particular modification of the chemical processes which constitute the life of the organism it attacks.

The first aim of preventive medicine is, without doubt, to understand these specific modifications, the second, to learn how to control them.

But in entering on the latter before we have accomplished the former of these aims, in seeking for the antidote before we know the nature of the poison, we are not only obeying an instinctive practical impulse, but are acting consistently with the principles of scientific investigation. In contagium we have to do, not with a lifeless substance, but with a living action by the exercise of which other living actions—those namely of our own bodies or the bodies of animals—are disturbed or disordered. Hence, even if our aim be restricted to the purely scientific one of finding out the nature of the action in question, we cannot work for this end more effectually than by attempting to discover how it may be antagonised. The search for specific disinfectants or colytics is one to which we are alike compelled by considerations of utility and attracted by the thirst for knowledge.

The want of sufficient knowledge of the intimate nature of contagia does not necessarily involve the futility of the investigation of disinfectants.

The considerations embodied in the preceding paragraphs appear to me to indicate the directions in which it is chiefly desirable that further investigations should be made with the view of acquiring a bettter and more practical knowledge of the art of disinfection. These are (1), the disinfection of liquid and solid excreta, and of clothing; (2), the disinfection of the air; (3), the detection of contagia in food, air, or water, which is about to enter the organism; and (4), the use of colytic agents with a view to the inhibition of infective action within the living body.

In the present paper I defer the discussion of the first two of these four headings, not because they can be regarded as of little importance, but because there is little hope of further advance until a better knowledge is forthcoming with reference to (3) and (4). In this connexion it may be well to note, with reference to the disinfection of air, that although it is well known that small quantities of air can be acted upon by heat in such a way as to deprive them entirely of whatever organised and consequently of whatever contagious particles they may contain, no experiments have as yet been made as to the destructive disinfection of large quantities, to the importance of which with special reference to the prevention of the spread of small-pox, I have already adverted. With reference to the other two subjects, namely, the detection of contagia in food, air, and water, and the problem of physiological or colytic disinfection, I propose now to state the considerations which seem to me to be of most value as guides in future investigations.

Those researches are at present most promising which aim at the discovery (1) of improved methods of detecting contagia and (2) of chemical agents possessed of colytic action.

In selecting methods for the detection of morbific ferments, we accept the definition of such ferments quoted above from Mr. Simon, taking as our point of departure the proposition that "they have their essence or "an inseparable part of it in certain solid elements which the micro-"scope discovers in them, and that these elements are living organisms." Whether, therefore, our modes of study be chemical or microscopical, they must be directed in the first instance to obtaining evidence of the presence of such organisms. The first question to be settled is whether microphytes are present at all; the second what are their kinds. The method of determining the first question is simple. It was indicated in my Report on the "Origin of bacteria" published in 1871. It is based on the now familiar experiment of impregnating a suitable sterilised soil (called a cultivating material) with a single drop of the water in question. If the seed thus sown germinates, the fact affords evidence that the particular drop and by inference every other drop contains germs.

Method of "cultivation."

In the attempt to pass from this first question to the second a fatal difficulty was at once encountered in the fact that all varieties of water when tested by it were found to be alike contaminated, and contained

microphytes potentially or actually. In other words the propriety of determining the existence and multiplication of microphytes by introduction into an otherwise sterile soil, was found to be so universal that it could not be used as a means of comparison or discrimination. Nor has the progress which has been made during the last ten years in associating certain apparently specific forms, when met with in the diseased living body, with particular pathological processes (such as those of anthrax, of leprosy or of tuberculosis) as yet made it possible to recognise these very forms as they occur in drinking water or in any other ordinary soil.

Detection and discrimination of contagious microphytes in water.

Very recently however a method of cultivation has been initiated by Dr. Angus Smith which offers a more encouraging prospect. Applying certain indications afforded by the discoveries of Dr. Koch in another field of experiment to the cultivation of the microphytes of water, Dr. Smith has been able to show that by his method,—which gives, as mine did, an almost invariably affirmative answer to the question whether microphytes in ordinary water are present or not,—the crops which result from sowing these microphytes differ according to their sources. The results which he has already arrived at encourage the hope that by the use of similar or of more improved experimental arrangements in combination with the systematic study of the morphological development of his organisms for his preliminary separation or sorting of which he has given those first indications, it may become much more possible than it has been hitherto to discriminate microphytes by their objective morphological characters. [Report for 1882, page 60, of Inspector under Riv. Poll. Prev. Act.]

Knowledge of the infective properties of water can only be obtained by biological modes of investigation.

Although in the examination of water with reference to its possibly morbific qualities, the first place must be given to the detection and discrimination of its microphytes, the morphological study of these organisms by the method of cultivation is not likely to yield results of value unless it is carried on with regard to the physical and chemical conditions on which these organisms depend for their existence. A foundation for knowledge of this condition is afforded, as regards drinking water, by the ultimate analysis of the organised matter which it contains. But, however indispensable this information may be, it is by itself unavailable for the solution of the questions we have to answer. It does not even help us to discriminate between living and non-living, much less between active and inert, between hurtful and innocuous. The only chemical methods which are calculated to aid in this discrimination are such as are based on the observation of the properties which microphytes possess by virtue of their vitality; and, inasmuch as their vital activity is twofold, relating on the one hand to their evolution or development as organisms, on the other to the chemical changes which constitute their life, it is equally clear that (just as was shown to be the case as regards the microscopical ones) the methods used must relate not to the statical facts brought out by a single chemical analysis, but to the dynamical, *i.e.*, vital facts which are to be learned by the investigation of continuous physiological processes.

The physiologist habitually gauges the vital activities of organisms by the determination of the ultimate products of their vital metabolism, in other words, by determining the chemical changes which go on continuously between them and their environment. And the general result of such inquiries is that these changes are in so far characteristic that for each kind of organism there is a constant ratio between its external chemical relations and its weight. So little has been hitherto done in this direction, as regards the microphytes of water, that it is impossible to illustrate the indications I have given practically, and it would be premature to attempt to define the methods by which they might be carried into effect. My object is answered if I have shown that, in the

examination of water for the purposes of public health it is desirable to add to the approved methods of qualititative analysis a much more complete and systematic examination of its biological properties than has hitherto been attempted—an examination which, taking its point of departure from the qualitative sorting of its microphytes (account being of course taken only of those closely relative to the microphytes of contagium) should aim at acquiring knowledge as to the morphological development of each species, and second as to its external chemical relations with its environment.

All that has been said above as to the detection and discrimination of microphytes in water is directly applicable to the question of the investigation of air; first, because there is reason to believe that air-microphytes inhabit the water particles suspended in it; and, secondly, because the only way of carrying out the examinations is by collecting its particles in water.

The search for microphytes in air and water is useful only in so far as it serves to guide us in the exclusion of infective material from the human organism. After destruction, exclusion is, without doubt, our primary duty in relation to contagia; whatever means are effectual for either of these ends, we are bound to apply as if we had no other resource. But inasmuch as however perfect our exclusive measures may be, contagia will still find their way into the human organism, the question whether or not it is possible to inhibit their action after they have so entered in spite of our exclusive prophylaxis, comes to be of very great importance.

Is it possible to inhibit the action of contagia after they have entered the human or animal organism.

In relation to this part of the problem of disinfection the disadvantage arising from want of knowledge presses upon us even more than before. The information we at present possess amounts to little more than this, that all contagia owe their power to their continued chemical action on the living substance of the organism they attack, that this action is in the chemical sense a fermentation, *i.e.*, analogous to the chemical changes produced outside of the living body by the bodies called ferments on the substance which each ferment is capable of modifying, and that in their action they more closely resemble those particular ferments which are produced by the ubiquitous organisms referred to above as common microphytes than any others. This resemblance consists, first, in their being able to produce that particular disturbance of the functions of the human or animal body, attended by diminished chemical stability of its substance and increased temperature which we call fever; secondly, on their being able to act locally, so as to induce disintegration or inflammation of tissue, wherever they are actually present; and, lastly, in their tendency to determine their own activity after the lapse of a limited period of active existence.

Comparison with reference to the above question of common with specific contagia.

These properties which the specific contagia possess in common with the septic are, however, manifested by them with the greatest possible diversity, both as regards the relative intensity of the local and general effects, and more particularly as to the order of time in which these succeed each other. For whereas the symptoms of septic infection follow immediately on the invasion of the septic poison, and as rapidly subside, the specific poison waits until a definite period (of incubation) has lapsed, and retains its hold on the infected organism for a period equally definite; the duration both of the initial delay and of the pathological disturbance which follows it being in general characteristic of the particular species.

I have thus briefly adverted to these analogies and differences between common and specific infection, because they require to be considered in relation to the practical question we have before us. Agencies which are antagonistic to septic infection at and after its penetration into the

human or animal organisms, are known, however little may be known of the way in which they act. Is there sufficient reason for hoping that similar agencies might by investigation be discovered with relation to specific contagia? The answer to be given to this question depends on our estimate of the significance of the differences and resemblances above enumerated, and others of a similar nature. The most noteworthy of these differences is this, that the microphytes of the specific contagia in contrast to those of sepsis are of necessity adapted to a life inside the affected organism, an adaptation which in the case of the acute infections (as is strikingly seen in the relapsing fever) ceases after a limited time. Obviously this cessation must be due to the coming into existence of antagonistic conditions not before present. If it were possible to determine in what these consist, such knowledge might be expected to afford us the key to their inhibition.

Spontaneous determination of the morbid process in acute contagious diseases. Nature of the action on which it depends.

There are clearly two ways in which we might hope to attain such knowledge. We might hope to arrive at it by fortunate experience, as men are supposed to have learnt the virtues of Jesuits' bark as an antidote to malaria, or by the ordinary method of investigations of nature; that which consists in first defining the possible relationships of the unknown to the known, and then determining the value and reality of these relationships, discriminating between the true and the false, between the essential and the acccidental by experiment.

In the successive evolution of contagia it can scarcely, I think, be doubted that the septic infection which is dependent on conditions which are relatively so simple must have preceded the rest in time, in other words, that all contagious microphytes are related by descent to the "common microphyte" of sepsis, and consequently that whatever properties belong to the parent are likely to be represented, more or less modified, in those of the successors. If, for example, it can be certainly stated that the instrument or agent by which the septic microphyte produces its toxical effect is a ferment in the chemical sense, we are justified in assuming that the morbific action of the microphyte of small-pox is of the same nature; and if it can be shown that the septic fermentation is necessarily brought to an end by the development of an antagonistic chemical action, there is at least ground for the surmise that the mechanism by which the variolous fermentation brings itself to an end may be of the same nature, and consequently within reach of investigation.

Recent researches relating to the chemical characters and products of the septic decomposition of proteids have shown that the development of microphytes in an albuminous fluid undergoing sepsis at a favourable temperature is a terminable process, reaching its greatest activity a few days after the impregnation of the liquid with septic ferment; and that it is during this period of active vegetation that the liquid acquires its greatest toxical activity. After the culmination of the process the organisms cease to multiply and eventually die. As this takes place long before the whole of the proteid material is used up it cannot be attributed to want of nutriment, and there is good reason for regarding it as the result of the coming into existence of chemical bodies in the liquid, as the result of the breaking up of the proteid molecule, which possess the power of arresting the growth of ferment organisms. The bodies in question belong to the aromatic group, and are represented at an early stage in the septic process by acids of the acetic series in which an atom of hydrogen is replaced (as in phenyl-acetic and phenyl-propionic acids) by an aromatic group. The latter of these has been found by experiment to be destructive of the vitality of microphytes in a degree which is 20 times greater than that in which carbolic acid acts, and is such as to bring it into equality in this respect with the most powerful antiseptics known. Under conditions of

Spontaneous determination of the septic process. Agency of the aromatic products of sepsis in arresting the development of saprophytes.

sepsis slightly different other analogous series of aromatic compounds are produced which have not yet been subjected to physiological investigation.

Of late years physiologists have become familiar with the fact that chemical bodies belonging to the aromatic group, some of which are specifically identical with the aromatic products of sepsis, take part in the normal exchange of material of the living human or animal body. Their appearance in the urine in unnaturally large amount, when, as in cases of ileus, septic products are absorbed from the accumulated intestinal contents, indicates their relation to sepsis, and affords ground for the inference that they normally come into existence as products of a similar disintegration of the proteid molecule. That this is so is confirmed by the observation that the proteid disintegration of tissue which takes place in the animal body, in poisoning by phosphorus, occasions a prevalence of aromatic bodies, as indicated by the discharge of phenyl compounds by the kidneys, similar to that determined by the absorption of septic products.

The property which so many of the aromatic bodies possess of arresting the vitality of ferment organisms must for the present be regarded as purely organoleptic, for we can only define it by reference to the particular effects which the bodies in question produce on particular kinds of living protoplasm. Their production as fruits of the operation of the very life which, from the moment of their constitution they tend to annihilate, may be satisfactorily explained on the hypothesis that an aromatic remainder takes part in the constitution of the proteid molecule, and consequently that aromatic bodies are to be looked for among the products of its disintegration. But in biology we do not content ourselves with the discovery of the causal relation between a fact and its antecedents, but look for a complete solidarity between all the phenomena of a living organism, whether successive or collateral, a relation of such a nature as to strengthen its capacity of continued well being, and to furnish it with the means of struggling against hostile agencies.

All questions relating to the forms and even to the mechanical functions of animal and plant life, are regarded by naturalists habitually and without hesitation from this point of view, but its application to chemico-vital processes is much less familiar. There is, however, no intelligible reason why we should not take the same view of these that we do of the others. There is no reason why we should not admit that the existence in the animal body of a particular group of chemical compounds, endowed with a property which is clearly useful, as well as the metabolic process of which these are the products, is one of those "all things" which no less the form and the structure of the body and its parts work together for the good of the whole.

The purpose which I have in view in this application of the doctrine of evolution to pathology is that it may serve as an indication of the line of inquiry which it is our duty to follow in relation to it in order to eventually acquire that knowledge of its nature and mode of action, which will enable us to encounter it on its own ground; for this end two things are necessary. We should in the first place aim at substituting for the vague notions we at present possess of the action and counter-action of septic ferments and their antagonists when opposed to each other in presence of the living protoplasm of the human body, exact knowledge based on experiment and clinical observation, and, secondly, we should, employing the same methods, endeavour to extend that knowledge to the specific contagia, with a view to the eventual discovery of specific antagonists to them.

No. 3.

On Further Researches on the Chemical Constitution of the Brain; by J. L. W. Thudichum, M.D., F.R.C.P. Lond., &c.

CONTENTS.

Page

(1.) Introduction - - - - - - - - 221

(2.) On *Lecithin*, hypothetical and real - - - - - 224

(3.) Further study of *Paramyelin*, its isolation, analysis, and compounds - 231

(4.) *Amidomyelin*, a new immediate principle of the brain, type of the diamidated phosphatides; its isolation, analysis, and compounds - - 233

(5.) *Sphingomyelin*, a new immediate principle of the brain, type of the diamidated phosphatides which contain no glycerol; its isolation, analysis, chemolysis, and compounds - - - - - - - 237

(6.) *Assurin*, a new immediate principle of the brain, type of the diamidated diphosphatides; its isolation and analysis - - - - - 248

(7.) Further study of *Kerasin*, the second cerebroside, with a view to fixing its chemical constitution, and separating it from sphingomyelin - - 249

(8.) *Bregenin*, a new immediate principle of the brain, type of a new class of bodies termed *Amidolipotides*, or nitrogenised fats; its isolation and properties - - - - - - - - - 253

(9.) *Krinosin*, a new immediate principle of the brain, being an analogue, or second homologue, of the new series of amidolipotides; its isolation and properties - - - - - - - - - 255

(10.) Review of the immediate principles of the brain and their derivates, which I have discovered in the course of my researches, and described in these reports - - - - - - - - - 256

1.—Introduction.

The principal object of the first part of the following inquiries has been the elucidation of the nature of those phosphorised substances of which I had given a preliminary notice in my research of 1874, under the name of *amidomyelins*. I have for the purposes of the present research isolated and analysed two representatives of this remarkable class of bodies, one *amidomyelin*, which completely bore out the theory of the composition which I had assigned to certain compounds of brain educts with platinum and cadmium chloride; another *sphingomyelin*, which was found to be almost identical with the *apomyelin* of my first research, and to be, not as I had at first surmised, a product, but a genuine educt and immediate principle of the brain. I shall show that this latter body, sphingomyelin, differs in chemical constitution from the other phosphorised matters as hitherto formulated in this, that it does not contain any glycerol, and does therefore not yield, on chemolysis, any glycero-phosphoric acid, but phosphoric acid without any attached organic radicle. This afforded a new insight into the chemical constitution of the phosphorised substances altogether, and I have therefore subjected their theory to a revision. According to the results of this revision the phosphorised substances are not glycerides at all, as commonly defined, and have nothing in common with fats, considered as glycerides, except that some of them contain certain fatty acids also present in fats, while they differ widely from fats in chemical and physical properties. In accordance with this new knowledge I have termed the phosphorised substances *phosphatides*, that is to say, substances which are similar to (but not by any means identical with)

phosphates. I shall show that there are present in the brain and other protoplastic centres bodies which contain the phosphorised radicle twice, and may therefore be described as *diphosphatides*, the immediate principal representative of this class contains about seven per cent. of phosphorus. I shall further show that the new information confirms all I have said formerly as regards kephalin, myelin, paramyelin, lecithin, and their congeners.

As sphingomyelin on chemolysis yielded its phosphorus in the form of phosphoric acid only, I explained it to be a phosphoric acid

$$OP\begin{cases}HO\\HO\\HO\end{cases}$$

in which three radicles of HO had been exchanged for three more compound radicles. These radicles were found by chemolysis to be, firstly, a fatty acid, $C_{18}H_{36}O_2$, being the third isomer of stearic acid, *sphingostearic* acid, fusing at 57°, therefore at almost the same interval below, as the second isomer of stearic acid, namely, neurostearic acid (fusing point 84°) fuses above the fusing point of ordinary stearic acid, which latter melts at 69°·5; secondly, an alcohol of the empirical formula $C_9H_{18}O$, or $C_{18}H_{36}O_2$, which on the supposition that the latter formula expressed its atomic weight would be the fourth isomer of stearic acid; thirdly, an alkaloid closely resembling the sphingosin of the cerebrosides, $C_{17}H_{35}NO_2$, but showing a little more carbon and hydrogen, so as to answer to the formula $C_{20}H_{41}NO_2$; fourthly, to these groups a molecle of neurin, $C_5H_{13}NO$, was yet attached. Thus from its chemolysis we are able to attribute to springomyelin three somewhat different formulæ of constitution, in each of which three terms are certain, while of the remaining two terms one is certain as regards its percentic composition, but uncertain as regards its atomic weight, while the other, namely, the second nitrogenised radicle, is not yet sufficiently well defined to afford much aid to synthetical calculations. The three different formulæ of sphingomyelin are condensedly expressed in the following :—

$$OP\begin{cases}C_9H_{17}O & \text{or } C_{18}H_{35}O_2\\C_{20}H_{40}O_2N & \text{or } C_{17}H_{34}O_2N\\C_{18}H_{35}O_2 & \\C_5H_{13}ON & \text{or } C_5H_{11}N\end{cases}$$

The smallest formula gives a total of $C_{52}H_{104}N_2PO_7$, while the largest leads to a formula with C_{61}, but all empirical formulæ for sphingomyelin which we shall have to consider below, lead to the necessity of assuming the presence in the free body of a few molecles of water, which are not accounted for by the sum of the products of the chemical cleavage. Now it is certain that the smallest formula just given, and which is almost identical with the formula for apomyelin formerly given, is only a type, and that there are varieties in which either the alkaloid or the fatty acid or the alcohol differ from those just formulated, probably by $-+CH_2$, or $-+nCH_2$, the variation of the n not amounting, on the widest supposition, to more than nine, as above indicated. This is exactly the extent of the variation between the two formulæ of sphingol as above described; and if we consider that the increase in CH_2 of the alkaloid obtained by chemolysis beyond the quantities demanded by the formula of sphingosin, may be due to the admixture of a small quantity of a body being a compound of sphingol, $C_{18}H_{36}O_2$ and sphingosin, $C_{17}H_{35}NO_2$, total, $C_{35}H_{69}NO_3+H_2O$, then we cannot doubt that the limits of error are confined between very small dimensions.

The typical sphingomyelin crystallises well in microscopical plates, combines with cadmium chloride in two ratios, the compounds being crystalline, and gives up one nitrogenised radicle on limited chemolysis, namely, the loosely bound neurin, $C_5H_{13}NO$, leaving an acid which contains all the phosphorus of the sphingomyelin together with half the original nitrogen, and in which, therefore, N : P=1 : 1. The formula of the acid derived from the C_{83} sphingomyelin is $C_{48}H_{95}NPO_{12}$.

Of *amidomyelin*, the immediate principle of which I had theoretically established the existence in the brain on the basis of many analyses of precipitates obtained from brain extracts by cadmium and platinum chloride, I have now practically proved the individuality by direct isolation and analysis. But I have not had either material or time to ascertain anything about its constitution by chemolysis of the pure substance. There are, however, some data available for a preliminary view of this point in a research on the chemolytic products of a cadmium-precipitate, which in the relative research I have described as the principal cadmium salt.

Amidomyelin is analogous to sphingomyelin and apomyelin in this, that it contains two atoms of nitrogen upon one of phosphorus; these two atoms of nitrogen are disposed in two different radicles, and influence the character of the compound, so that it presents itself as a diacidic base, or a dipolar alkaloid. In the latter quality it combines with cadmium chloride in two ratios, the fully saturated compound of the formula $C_{44}H_{92}N_2PO_{10}$ $(CdCl_2)_2$, requiring 30·37 % $CdCl_2$, and actually yielding to analysis 29·41 %.

The diamidated phosphatides yield hydrochlorates which crystallise from anhydrous solvents in the presence of excess of acid in exquisite form and purity, but they are not stable in the presence of watery reagents, and yield hydrochloric acid to solvents at every recrystallisation, so as to become almost free from the acid by mere repetition of this process. When the hydrochlorates are produced from the cadmium salts, they are of course mixed with double the quantity of hydrochloric acid necessary for neutral salts, and at this point great care is required so to manage the necessary warming of the mixture that the salt may be formed without any very great part of it being chemolysed under the influence of the redundant hydrochloric acid.

Of the monoamidated phosphatides I have subjected to special study *paramyelin*, already described in my first research, and *lecithin* as defined by its discoverer Gobley and by Strecker. Of paramyelin I have abundantly established the individuality, but I regret that time did not allow me to study its constitution by the analytical process of chemolysis. On lecithin I have instituted a great number of experiments, with the special object of isolating it as a pure principle. As the result of these operations I am enabled to state that no inquirer before me has isolated lecithin as a pure principle and preparation, and that I was absolutely correct when I stated in my first research that I had not then actually but only virtually proved the presence of lecithin in the brain.

The diphosphatide to which I have already alluded, in which N : P=2 : 2, and to which I have given the name of *Assurin*, has, in its platinum-chloride compound, the formula $C_{46}H_{94}N_2P_2O_9$. It is at present the most phosphorised body of this class known, while one of the least phosphorised, relatively to the nitrogen, is a phosphatide educed from the bile as a crystallised platinum-chloride salt in which N : P=4 : 1, and which has a formula by which it is characterised as a tetra-polar alkaloid, the four basic poles corresponding to the four nitrogenised radicles with which the body is endowed.

It is probable that the brain contains a phosphatide *free from nitrogen*. I have isolated and analysed such a principle, but it has to be proved to be an educt.

Thus I have shown that the phosphorised educts of the brain are a class of bodies with numerous genera, each genus having again varieties, that they are of greatly varying chemical constitution and function, and that they are so distributed as to show that they are specifically concerned in the most intimate parts and processes of protoplasmic life.

Although much work has been done regarding the *cerebrosides*, particularly *kerasin*, and although its knowledge has been greatly advanced by the discovery of processes for its separation from sphingomyelin, and more particularly from a body hitherto unknown, and to which I attribute the name of *krinosin*, yet the circumstances will not allow me to finally fix by chemolysis its rational constitution in the same manner as this has been done for *phrenosin*.

The *cerebrinacides*, or cerebrin-like bodies which combine with lead, and of which I described some in my last report, have not been treated any further. They will yet require long and important researches, not only because they are numerous, but more particularly because they occur mixed with *a class of sulphurised bodies* hitherto unknown, and of which I gave a preliminary sketch in my last report.

I have discovered an entirely new series of bodies, which are so constituted and exhibit such properties that they may perhaps be described as *nitrogenised fats*. Of these the first is *bregenin* (from the low German "bregen" head or brain), which is easily soluble in cold ether, crystallises, and has the formula $C_{40}H_{81}NO_5$. The second one is *krinosin* (from the Greek word for hair, the wavy crystals resembling a mass of tangled long hair), $C_{38}H_{75}NO_5$, insoluble in cold, easily soluble in boiling ether.

Besides what I have stated in the foregoing, I possess a good number of aperçus, all supported by chemical preparations, indicating further discoveries; the new bodies are easily distinguished by their properties from known bodies, but their exact definition has to be accomplished by further inquiry.

By my researches the brain is shown to be the most diversified chemical laboratory of the animal body; by my researches it is shown that all other organs, even when the results of their chemical action are added to them, are relatively much more simple and very much less specific in their chemical constitution than the organs producing and conducting nerve power.

(2.) Lecithin, Hypothetical and Real.

Lecithin was first recognised as the principal ingredient of the so-called "viscous matter" from the yelks of hen's eggs by Gobley*. This inquirer subsequently found the same matter in the brains of animals and human beings, and said that it was characterised by always yielding on chemolysis by mineral acids or alkalies with the greatest facility oleic, margaric, and glycero-phosphoric acid. He knew that it contained nitrogen, but was unable to ascertain the form which it assumed under the influence of the chemolytic process.

In the researches which were published during a dozen or more years following the last publication of Gobley lecithin was never mentioned until Diakonow† applied the name to a substance which he had

* *See* a Complete Abstract of Gobley's Researches in "Reports," etc., New Series, No. III., 1873, p. 224.

† *See* Abstract in "Reports" just quoted, p. 242.

isolated from cow's brain, and to which he attributed the formula $C_{44}H_{90}NPO_9 + aq$. It yielded glycerophosphoric acid, but instead of the two fatty acids signalised by Gobley, namely, oleic and margaric, two molecles of stearic acid were said to have been obtained by its chemolysis. It was also found to yield the neurin which had previously been believed to be a specific product of decomposition of the so-called protagon. He concluded that protagon was a mixture of lecithin as defined by himself, with the cerebrin originally described by Müller.*

Lecithin (from eggs) was next examined by Strecker,† and found to yield the three acids first indicated by Gobley, namely, glycerophosphoric, oleic, and margaric acid, besides neurin, and to have the formula $C_{42}H_{84}NPO_9$.

This author also analysed some compounds of his lecithin with cadmium chloride, and platinum chloride, which led him to consider them as mixtures of different, though similarly constituted, compounds. He did not give a single nitrogen quantation, probably because his figures for that element differed even more amongst each other than the figures found for cadmium, platinum, and chlorine differed in different preparations.

Thus far, therefore, nobody had seen the principle, to which Gobley originally gave the name of lecithin, as a pure preparation, only Diakonow claimed to have analysed a pure product, which, however, differed greatly from Gobley's and Strecker's lecithin, as has been shown above. If it really had possessed the chemical constitution which Diakonow ascribed to it, it might have been termed "a lecithin," in accordance with the practice in chemical literature, whereby a specific name may be used as a generic one for bodies which are either analogous to or homologous with each other. But it should certainly not have been termed lecithin simply in the face of the precise statements and experiments of Gobley.

However, Diakonow and Strecker both admitted the probable existence of many lecithins; but while the former assumed that each lecithin contained two identical fatty acid radicles, such as two oleyls or two stearyls, the latter assumed each lecithin to contain oleyl as an unfailing ingredient and any other fatty acid radicle besides. It is probable that as regards the matters which each of these authors actually examined, analysed, and chemolysed, Strecker was correct and Diakonow in error. For while Strecker's (oleo-margaro) lecithin, even if it should ultimately be found to be a mixture, can be proved to have the constitution ascribed to it, Diakonow's dioleolecithin has never been isolated, even by this author himself, and his distearolecithin has never been isolated by anybody else. At all events, before the existence in the brain of a lecithin of the composition indicated by Diakonow can be admitted, it must be shown how the process for its isolation disposes of those lecithin-like bodies which I have described under the names of the kephalins and kephaloidins, and which contain a molecle of stearyl or margaryl, coupled with a molecle of the radicle of a peculiar fatty acid to which I have given the name of kephalic acid.

There remains indeed for comparison the body which I have termed myelin, and of which the chemolytic products are not yet ascertained. But myelin is not a lecithin (namely, a fat, an ether, and a base simultaneously), but is distinctly a dibasic acid, and of such strength that it expels acetic acid out of the lead salt without the assistance of ammonia. Moreover, the description of the properties of his lecithin

* *See* Abstract in "Reports," etc., pp. 227 *et seq.*

† "Reports," p. 244.

given by Diakonow distinguishes it widely from myelin; the nitrogen of this lecithin, too, was nearly one fifth in excess of the quantity required by the proportion in which they are present in a true lecithin, namely, of $P : N = 1 : 1$.

From the foregoing it will be seen that what is now commonly stated in chemical and physiological works concerning lecithin refers mainly to hypothetical bodies, which have not been isolated in the pure state. If one body which can be isolated at the present time has been correctly defined by a synthetical process with the aid of the formulæ of its cleavage products, this is due to an accident mainly. But whether it be the result of skill or accident, it is certain that in the course of the operation there were left out of sight a number of principles and their cleavage products, which must have forced themselves upon the attention of the observers at every step of their analytical proceedings.

I allude to principles which I have termed amidomyelin and apomyelin, and which I have formulated so that they were shown to contain two molecles of nitrogen to one of phosphorus, or $P : N = 1 : 2$. Of these the amidomyelin I had not isolated at the time of the publication of my first research (1874), but the apomyelin had been isolated and correctly described at that time. I entertained, however, some doubt as to whether apomyelin were an educt or a product. I shall sohw in the following that it is unquestionably an educt or immediate principle, and I shall further show that amidomyelin is also an immediate principle. There may be several apomyelins and amidomyelins, but of the latter one or other is always present in the mixture termed lecithin by Gobley, Strecker, and others.

In my first research (1874) I stated that I had not actually, though virtually, isolated lecithin from the brain. I have now shown that no one else has ever isolated lecithin from the brain as a preparation and pure principle. I have shown that Diakonow obtained an excess of nitrogen over phosphorus in his lecithin, and I explain this excess by the presence in his preparation of a portion of one or other of the diamidated bodies which I shall have to describe. I have shown that Strecker gave no nitrogen analyses, probably because he found a varying excess of this element and could not explain its variation. The probability of this explanation I base upon the fact of the variations in the quantities of cadmium chloride, and platinum chloride which he found in his compounds, variations which, according to my researches, go parallel, on the whole, to those of the nitrogen in the mixtures.

Lecithin.

Definition.—Lecithin is a phosphorised and nitrogenised immediate principle of (protoplastic tissues, including brain and egg-yelks, for our present purpose of) brain tissue. There are three varieties known all containing neuryl, oleyl, glyceryl, and a third acid radicle replacing hydroxyl in the phosphoric acid; the three varieties differ as regards the third acid radicle.

Isolation.—It can be isolated by the processes sketched on p. 181 of Rep. III., 1874, but more conveniently by the following. The alcoholic extract of brain matter from which white matter has been deposited is concentrated until on cooling it forms the deposit called *buttery*. This is isolated by filtration, re-dissolved in warm spirit and treated with lead acetate and ammonia as long as a precipitate is produced and filtered hot. The filtrate deposits a crystalline mixture of cholesterin, lead salts, and lecithin. This mixture is again isolated by filtration, dissolved in hot spirit and allowed to crystallise again. To

the solution filtered from the first deposit as well as to that filtered from the second crystals an alcoholic solution of cadmium chloride is now added, as long as a precipitate is produced; then half the volume of the cadmium chloride solution already used is added to the mixture. The precipitate is isolated by filtration and dissolved in boiling spirit; the solution, filtered hot, is allowed to deposit the salt, which is then filtered off. This is a mixture of three, may be four, compounds, one of lecithin with cadmium chloride, another of paramyelin with the same salt, a third of amidomyelin, and a fourth of sphingomyelin with cadmium chloride. The last is, if at all, present in the smallest quantity; the lecithin and amidomyelin compounds are present in about equal quantities and constitute the great bulk of the precipitate. The precipitate is dried in vacuo over sulphuric acid (when dried on the water-bath it becomes coloured), finely powdered and exhausted with ether. It is again dried and powdered and treated for the separation of the several compounds as follows:

The dry precipitate is suspended in a large volume of anhydrous benzol and frequently stirred; kephalin cadmium chloride and kephaloidin cadmium chloride are extracted at this stage; the mixture is then boiled for some time in a water-bath, and a portion of the benzol is removed by distillation. The mixture is now allowed to stand in a cold place for 24 hours and then thrown on a filter. The matter remaining on the filter is subjected to the same treatment with fresh benzol as often as may be necessary to exhaust it of all matter soluble in cold benzol. The matter insoluble in cold benzol is now again boiled with benzol and thrown on a filter kept hot by a steam-jacket. A benzol solution now passes through the filter, which deposits a compound on cooling, and keeps little or nothing in solution. This treatment also is repeated until the insoluble compound yields nothing to boiling benzol. The cadmium chloride precipitate has thus been separated (leaving the kephalin compounds out of consideration for the present) into three different matters:—

(1.) Compound soluble in cold benzol, lecithin cadmium chloride.
(2.) Compound soluble in hot benzol, deposited on cooling, paramyelin cadmium chloride.
(3.) Compound insoluble in benzol, cold or boiling, amidomyelin dicadmium chloride.

As sphingomyelin is somewhat soluble in cold alcohol, it is to be expected that a small quantity is present in the mixture of which the three compounds just defined are the principal constituents. It may be separated from the amidomyelin in the manner to be described below. But its presence in the cadmium chloride precipitate from buttery matter has not been proved; in the process of separating the educts by solvents only it remains mainly if not entirely with the cerebrosides and cerebrinacides, after the lead process with the cerebrosides only, to one of which, kerasin, it has a slight chemical affinity. This might explain its absence from the buttery matter.

Episode concerning the Shifting of Cadmium Chloride in Mixtures of Lecithin, Paramyelin, and Amidomyelin during re-crystallisation from Spirit.

It was observed that precipitates which had been exhausted with ether, and therefore were free from uncombined lecithin, after re-crystallisation from spirit left some free lecithin in the mother-liquor, which could be precipitated by renewed addition of cadmium chloride solution. It had also been observed that such precipitates containing amidomyelin showed a higher percentage of cadmium chloride than

before. Similar data were also obtained during the treatment and analyses of the platinum salts. On the basis of these observations the following hypothesis was formed.

Amidomyelin probably combines with cadmium chloride in two proportions, namely, either with one molecle of this salt, or with two molecles, thus:

$C_{44}H_{92}N_2PO_{10} + CdCl_2$, containing 17·90 % $CdCl_2$.
$C_{44}H_{92}N_2PO_{10} + 2CdCl_2$, containing 30·37 % $CdCl_2$.

The former has a tendency to saturate itself in the presence of lecithin cadmium chloride.

$C_{42}H_{84}NPO_9 + CdCl_2$, containing 19·42 % $CdCl_2$, and during re-crystallisation from spirit, or during suspension in benzol in which the lecithin salt is in solution, takes up some cadmium chloride from a portion of the lecithin, which is thereby set free and remains in the spirituous, or as the case may be, benzol mother-liquor. This kind of shifting of the cadmium chloride is more likely to occur in anhydrous solvents, or strong spirit, whereas the dissociation under the influence of water, complete during the process of dialysis, is partial, particularly in dilute solvents or edulcorants.

Continuation of the Description of the Process.

The solutions in cold benzol obtained in the process described in the foregoing are allowed to stand for some days in the cold and repeatedly filtered. They are then concentrated, allowed to stand, and filtered again, until the residual solution remains quite clear and free from deposit. Filtration is absolutely required to prove the absence of deposits, as these are so transparent that they easily escape from observation by the eye.

The concentrated thick benzol solution, which is mostly coloured and strongly fluorescent, may now be evaporated to dryness, and the residue further studied. But it is preferable to add to it absolute alcohol as long as a precipitate ensues. Time is again wanted to complete the precipitation. The precipitate is washed with alcohol, dried in vacuo, exhausted with ether, and re-crystallised from spirit. Now a portion remains insoluble in boiling spirit, but the bulk dissolves and is deposited on cooling as a white mass, which, under the microscope, is seen to consist entirely of needles arranged radially in stars and balls.

Separation of Lecithin from Amidomyelin and Paramyelin when all are in the free state.

All three bodies are precipitated by cadmium chloride and the compounds are soluble in boiling spirit. When the mixture is decomposed in one way or another, and the resulting free bodies are dissolved in hot spirit, the amidomyelin and paramyelin separate first in the shape of white leaflets, again on concentration; from the highly concentrated spirit a mixture of lecithin and little amido- or paramyelin is at last deposited as an unctuous mass. When this is treated with ether white amido- or paramyelin remains insoluble. When the ether solution is distilled to dryness and the residue treated with *absolute* alcohol, lecithin dissolves, while again some amido- or paramyelin remains insoluble. The absolute alcohol solution deposits more amido- or paramyelin on long standing, particularly at low temperatures. But it is, perhaps, not practicable to obtain perfectly pure lecithin without a trace of amido- or paramyelin by this process, although the amido- or paramyelin obtained by it is perfectly free from lecithin. A specimen of lecithin

thus prepared (by dialysis, &c., but not separated as $CdCl_2$ salt by by benzol) gave the following data on analysis:—

(1.) 0·8178 gave 0·1073 pyrophosphate of Mg=3·66 °/₀ P.

(2.) 1·2515 gave 0·2496 Pt=2·83 °/₀ N.

The amount of nitrogen shows that the body yet contained some amidomyelin.

The lecithin, when thus purified as far as possible, gives a white $CdCl_2$ salt which is soluble in boiling spirit, and when deposited from it leaves some coloured impurity in solution.

On the mode of separating lecithin from amidomyelin by benzol, when both bodies are combined with $CdCl_2$, *see ante*, and in the relative paragraph under amidomyelin. Paramyelin can be separated to some extent from amidomyelin by the greater solubility of its hydrochlorate, but completely only by the solubility of its cadmium chloride compound in boiling benzol, in which amidomyelin is insoluble.

Properties of Lecithin.—Lecithin is a white crystalline body, crystallising in thin plates, which when compressed form a wax-like mass. It is very soluble in spirit, being only deposited when the solution is extremely concentrated. A slight rise in the temperature causes the crystals to re-dissolve. When to its cold saturated solution in spirit water is gradually added until a permanent considerable turbidity is produced, and when this turbidity is cleared up by heating, the solution deposits on standing lecithin in the semi-solid hydrated state. Of the solution in 80 °/₀ spirit treated as described 1·1684 g left 0·036 g of lecithin on evaporation, =3·08 °/₀. The unctuous lecithin under the microscope consists of balls, in concentric layers. Lecithin is easily soluble in ether.

It is easily soluble in chloroform, and is left on evaporation as a non-crystalline mass.

It dissolves in oil of vitriol, with a yellow colour, and on addition of thick cane-sugar syrup Raspail's reaction, a purple colour, is gradually produced, changing slowly into black. The reaction is due to the oleyl radicle contained in the lecithin.

Compounds of Lecithin.—An alcoholic solution of lecithin is precipitated by *cadmium chloride;* the white voluminous precipitate amorphous at first, crystallising on standing in the mother-liquor, is easily soluble in boiling spirit, and deposited on rapid cooling in white crystalline granules; on slow cooling, acicular crystals arranged in balls and rosettes are deposited. They are very uniform and characteristic, and totally different from sphingomyelin cadmium chloride. This precipitate is insoluble in cold and boiling ether, easily soluble in benzol.

Platinum chloride; the voluminous yellow precipitate is easily soluble in ether, and again precipitated from this solution by absolute alcohol. $2(C_{42}H_{82}NPO_8)+2HCl+PtCl_4$. Also with one HCl only, and with none.

Lecithin is not precipitated by a mixture of lead acetate and ammonia.

Solubility of Lecithin $CdCl_2$ Salt in Spirit.—10 c.c. of the 84 °/₀ spirit solution which had deposited a crystallised salt, on evaporation left 0·0387 g solid matter. One part of the salt therefore requires 258 parts of spirit at 17° C. for solution.

Bearing of the Lecithin $CdCl_2$ Salt with Benzol.—When the crystallised salt is placed in pure dry benzol it swells and becomes transparent, but does not dissolve. If now the mixture be heated for some time, the salt dissolves without residue, and the clear colourless solution does not form any deposit on cooling and standing.

Lecithin Hydrochlorate. — $C_{42}H_{82}NPO_8 + HCl$.—The pure white cadmium chloride compound is suspended in spirit, and the mixture is saturated cold with hydrothion. It is now heated in a water-bath to boiling while the current of the sulphuretted gas is continued, until the filtrate is no longer affected by it. The decomposed matter is thrown on a filter arranged on a steam-jacket, and the colourless spirit solution of lecithin hydrochlorate is separated from the cadmium sulphide. The solution deposits the hydrochlorate as a felted mass of crystals. By slow crystallisation from dilute solutions white crystals are obtained. As the cadmium chloride yields two molecles of hydrochloric acid, of which only one combines with the lecithin, the mother-liquor contains free acid in solution. As this acid decomposes lecithin at high temperatures, it is not advisable to endeavour to obtain the lecithin hydrochlorate which remains in solution in the spirit by evaporation of the latter by heat. It is preferable to extract all hydrochloric acid from the solution by mercuramin, re-precipitate the lecithin by cadmium chloride, and re-decompose this by hydrothion in a minimum of spirit. If it is desired to obtain the whole amount of lecithin in a given preparation as hydrochlorate, the body should be neutralised with the acid and the solution evaporated in a vacuum over lime and oil of vitriol.

The hydrochlorate crystallises in thin leaflets, to be seen by the microscope; they are hexagonal, frequently saucer-shaped, and owing to their extreme tenuity, mostly so distorted and crumpled up, that they appear as a confused mass of curved needles.

(*Human*) *Lecithin Hydrochlorate.*—By $CdCl_2$ from alcoholic solution of white matter and buttery. Passed through benzol process; the soluble in the cold part again re-crystallised from spirit. The white salt was decomposed by hydrothion, the solution allowed to crystallise; the crystallised mass was re-crystallised. Dried in vacuo to a perfectly white mass which could be powdered easily. At 98° it became a little soft and by prolonged heating somewhat coloured.

Analyes.

(1.) 0·3620 gave 0·0692 AgCl = 4·86 °/₀ HCl.
(2.) 0·4372 gave 0·0830 AgCl = 4·82 °/₀ HCl.
(3.) 0·3561 gave 0·0511 Pt = 2·03 °/₀ N.
(4.) 0·4372 gave 0·0672 $Mg_2P_2O_7$ = 4·29 °/₀ P.
HCl : N : P = 1·00 : 1·09 : 1·03.

(*Ox*) *Lecithin Cadmium Chloride.*

Atoms.	Theory.	Per cents.	Found.	
43 C	516	53·9	—	—
84 H	84	1	—	—
1 N	14	1·46	1·34	—
1 P	31	3·24	—	3·28
8 O	128	—	—	—
1 Cd	112	11·71	—	—
2 Cl	71	7·42	—	—
	956			
Lecithin	773	80·87		
$CdCl_2$	183	19·13		
	956			

$C_{42}H_{82}NPO_8 + CdCl_2$, At. W. = 942, requires 19·42 °/₀ $CdCl_2$.

Theory of Lecithins considered as Phosphatides.

Oleo-Palmito-Glycero-Neuro-Phosphatide.

$$OP\left\{\begin{array}{l}C_{18}H_{33}O_2\\C_{16}H_{31}O_2\\C_3H_7O_3\\C_5H_{11}N\end{array}\right\}=C_{42}H_{82}NPO_8.$$

Oleo-Margaro-Glycero-Neuro-Phosphatide.

$$OP\left\{\begin{array}{l}C_{18}H_{33}O_2\\C_{18}H_{33}O_2\\C_3H_7O_3\\C_5H_{11}N\end{array}\right\}=C_{43}H_{84}NPO_8.$$

Oleo-Stearo-Glycero-Neuro-Phosphatide.

$$OP\left\{\begin{array}{l}C_{18}H_{33}O_2\\C_{18}H_{33}O_2\\C_3H_7O_3\\C_5H_{11}N\end{array}\right\}=C_{44}H_{86}NPO_8.$$

C	42	504		43	516		44	528
H	82	82		84	84		86	86
N	1	14		1	14		1	14
P	1	31	4·08	1	31		1	31
O	8	128		8	128		8	128
		759			773			787

The first three radicles in each formula replace a molecle of hydroxyl each; but the addition of neurin takes place under circumstances which engender the expulsion of a molecle of water from the neurin itself. The mobility of this molecle of water in neurin is clearly shown in the course of the synthesis of this base.

(3.) Further Study of Paramyelin: Its Isolation, Analysis, and Compounds.

Under the name of *Paramyelin* I described in my first research on the brain an immediate principle which is a nitrogenised phosphatide, and is in the first stage diagnosed and separated by the solubility of its cadmium chloride compound in hot benzol, from which solution, filtered boiling, it is deposited on cooling. In this condition the compound is very voluminous and gelatinous, and is only with very great difficulty separated from the lecithin cadmium chloride compound which remains in solution in the cold benzol. The mechanical aids to this separation are two in number; one the cylindrical vacuum filter described in my first research, the other the use of very large volumes of benzol for the extraction of the soluble compound, the removal of the solution by the syphon from above the deposit, and very frequent repetition of this process. In this process the large volumes of benzol require many distillations for recovery; the deposition of the paramyelin compound requires time. But when once obtained free from matters soluble in cold benzol the compound behaves with great precision. It is, whilst moist with benzol, washed with spirit, which dissolves any colouring matter, and it is well to repeat this washing by shaking the compound in a bottle, &c., until the supernatant spirit is colourless. The compound thus obtained is soluble in boiling spirit, and deposited on cooling; it is easily decomposed by hydrothion in spirit, and the hot solution yields on cooling

white crystallised paramyelin hydrochlorate. This by re-crystallisation or washing loses its acid easily, and free crystallised paramyelin remains.

Analysis of a specimen of paramyelin cadmium chloride compound obtained from the extracts of human brain by the process described under lecithin, but without the previous purification by lead. Soluble in boiling, insoluble in cold benzol. Dried at 100°; 23 g.

(1.) 0·3876 gave 0·0620 CdO (by caustic potash from nitric acid solution) = 13·70% Cd (requires 8·69% Cl).

(2.) 0·3591 gave 0·0462 $Mg_2P_2O_7$ = 3·59% P.

(3.) 0·3591 fused with flux, &c, gave 0·1405 AgCl = 9·68% Cl (this requires 15·27% Cd, whereas only 13·70% Cd were found). Total $CdCl_2$ calculated from Cl = 24·95%.

(4.) 0·4346 gave 0·0518 Pt = 1·69% N.

(5.) 0·4814 gave 0·8322 CO_2 = 47·19% C, and 0·3442 H_2O = 7·94% H.

These data exhibit the following ratios:—

P : N = 1 : 1·06
P : $CdCl_2$ = 1 : 1·20
N : $CdCl_2$ = 1 : 1·13

If $CdCl_2$ be calculated from Cl, = 24·95 } = 100
then the organic molecle is = 75·05 }
If $CdCl_2$ be calculated from Cd, = 22·39 } = 100
then the organic molecle is = 77·61 }

These relations thus show a slight excess of nitrogen over the relation N : P = 1 : 1, and a more important excess of cadmium chloride over the presumable relation N : $CdCl_2$ = 1 : 1. But considering that the compound is a first product, the relations are satisfactory, as showing the firmness of the compound. In the following I give a comparison of this salt with the paramyelin salt from ox first described.

Summary of Human Paramyelin Cadmium Chloride.

	Per Cents.		
C	47·19		
H	7·94		
N	1·69	75·05	
P	3·59		
O	14·64		
(Calcd.) Cd	15·27	24·95	
(Found) Cl	9·68		

Summary of Ox Paramyelin Cadmium Chloride.

	Per Cents.		
C	49·288		
H	8·299		
N	1·598	78·725	
P	3·396		
O	16·144		
(Calcd.) Cd	13·020	21·275	
(Found) Cl	8·255		

Computation of the Organic Molecles of these Salts.

	Per Cents.	÷ At. Wts.	÷ P = 1.		Per Cents.	+ At. Wts.	÷ P = 1.	
408	C 62·87	5·239	34	C	62·607	5·217	37·5	456
68	H 10·58	10·58	68	H	10·541	10·541	75·8	76
14	N 2·25	0·160	1·03	N	2·029	0·144	1·0	14
31	P 4·78	0·154	1	P	4·313	0·139	1·0	31
128	O 19·50	1·24	8	O	20·510	1·281	9·2	144
649								721

The percentages of carbon and hydrogen are practically identical in both organic molecles. Other data show distinctly that the salt is not, and does not contain, either amidomyelin or sphingomyelin. The absence of lecithin follows from the solubility in cold benzol of its cad-

mium chloride compound. The data do, however, not show that the compound is unitary, and does not contain two or more similar principles (paramyelins). They also do not show the exact composition of the organic molecle, for, as we know from a vast amount of experience, this can only be ascertained with the aid of several compounds, and of the decomposition products of the principle under the influence of chemolytic agents. For the study of these relations the past has afforded no time or opportunity, and it must therefore be left to the future.

Preparation of Free Paramyelin from the Cadmium Chloride Compound.

The $CdCl_2$ salt of human paramyelin was suspended in spirit, and treated with H_2S, at first at the ordinary temperature, later on at 75° in the water-bath, until it was completely decomposed. The filtrate, on standing and cooling, deposited white crystallised paramyelin. The crystals were rhombic and hexagonal plates of microscopic dimensions. They were collected on a filter, washed, pressed, re-crystallised from spirit, to remove a trace of colour, and the rest of the hydrochloric acid, and dried in vacuo.

Analyses.

(1.) 0·3006 gave 0·0465 $Mg_2P_2O_7$ = 4·31% P.
(2.) 0·4936 gave 0·0719 Pt = 2·06% N.

These two analyses show that N : P = 1·00 : 1·00.

The atomic weight of paramyelin as deduced from the percentage of phosphorus is 688, as deduced from nitrogen 666, mean 677 (for the free body). The atomic weight of paramyelin (human) as deduced from the organic molecle in the $CdCl_2$ salt is 649 ; that for ox paramyelin combined in the same manner is 721, mean 680. These two means are practically identical.

The question now arises whether this phosphatide contains glycerol or not, neurin or not ; these questions can be answered by chemolysis only.

(4.) On Amidomyelin, a new Immediate Principle of the Brain its Isolation, Analysis, and Compounds.

In my first research I defined as amidomyelin a body which was met with in certain precipitates obtained from brain extracts by the agency of cadmium and platinum chloride. These precipitates were, as regards crystalline appearance and bearing towards solvents, seemingly homogeneous, but on elementary analysis they showed an irrationality between the phosphorus and nitrogen, which in not a few cases assumed the proportion of P : N = 2 : 3, all other elements being present in nearly the same average atomic proportions as those in which they are found in phosphatides in which P : N = 1 : 1. I explained these variations of the nitrogen as due to the presence of a compound in which P : N = 1 : 2. This principle I did not then isolate. But after the discovery of *apomyelin*, and lately of *spingomyelin*, in both of which principles P : N = 1 : 2, I resumed the subject, and isolated *amidomyelin* by the processes which have already been partially described under the chapter relating to lecithin. These processes had to be guided by incessant quantitative elementary analyses by which to control the progress and direction of the purification of the principle sought to be isolated. It was found that differentiating solvents and combinants were the principal means for effecting this isolation and purification, and that so-called fractional crystallisation and re-crystallisation were only of subordinate value.

No diagnostic value was found to be attached to so-called uniform crystalline or crystallised appearances; for a great number of chemically similar or dissimilar bodies would crystallise in such a manner as to make the impression of homogeneity upon the eye, while their diversity could be quickly and incontrovertibly proved by appropriate chemical reagents.

Recapitulation of the Description of the Process for the Isolation of Amidomyelin.

The buttery matter from human or bovine brains is dissolved in hot spirit, and to the solution an ammoniacal solution in spirit of lead acetate is added as long as a precipitate is produced. This precipitate is removed by filtration on a funnel heated by steam. It contains kephaloidin and myelin as lead salts; lead salts of phosphatides, free from nitrogen, and some lead salts of crebrinacides, the latter in small quantity. The filtrate deposits on cooling a mixture of cholesterin with lead salts, particularly of myelin and cerebrinacides, and other phosphatides in the free state, amongst them some amidomyelin. The clear filtrate is mixed with a spirituous solution of cadmium chloride as long as a precipitate is produced: an excess of cadmium solution is then added, and the mixture is allowed to stand for the precipitate to contract and settle.

The mixture of cholesterin, lead salts, and other phosphatides, is again boiled with spirit and allowed to become cool without having been filtered while hot. The liquid is filtered from the insoluble and crystallised matter, and in its turn treated with cadmium chloride solution in the manner stated for the first solution. In this manner the cholesterin and lead salts mixture is extracted with spirit as long as the mother-liquors give precipitates with cadmium chloride. The last extracts are the richest in amidomyelin. The cadmium chloride precipitates are all united, washed with spirit by decantation until the washings are colourless, exhausted with ether by decantation, dried in vacuo over oil of vitriol, powdered, and subjected to the benzol process, whereby they are separated into the three different compounds which have been described under lecithin. The compound insoluble in boiling benzol is the amidomyelin dicadmium chloride compound. When the cadmium precipitates are not thrown together, but treated separately by the benzol process, it is observed that those obtained from the earliest spirit solutions contain only little amidomyelin, while this ingredient gradually increases in quantity until in the cadmium precipitate obtained from the ninth or tenth solution there is found as much as 40% of the salt insoluble in boiling benzol.

Analyses of the Amidomyelin Dicadmium Chloride Compound, insoluble in boiling Benzol from Ox Buttery after Lead Process.

(1.) 0·4177 gave 0·6705 CO_2 = 43·78% C, and 0·2964 H_2O = 7·68% H.

(2.) 0·5241 gave 0·8430 CO_2 = 43·87% C, and 0·3644 H_2O = 7·72% H.

(3.) 0·6024 gave 0·1002 Pt = 2·38% N.

(4.) 0·5684 gave 0·1022 Pt = 2·55% N.

(5). 0·3570 gave 0·0604 Pt = 2·38% N.

(6.) 0·6816 gave (by molybdate method, &c.) 0·0629 $Mg_2P_2O_7$ = 2·57% P.

(7.) 0·2163 gave 0·0200 $Mg_2P_2O_7$ = 2·58% P.

(8.) 0·3890 gave 0·1795 AgCl = 11·42% Cl, and 0·0800 CdO = 17·99% Cd (17·99% Cd require 11·44% Cl).

Synopsis of Analyses.

	(1.)	(2.)	(3.)	(4.)	(5.)	(6.)	(7.)	(8.)
C	43·78	43·87	—	—	—	—	—	—
H	7·68	7·72	—	—	—	—	—	—
N	—	—	2·38	2·55	2·38	—	—	—
P	—	—	—	—	—	2·57	2·58	—
Cd	—	—	—	—	—	—	—	17·99
Cl	—	—	—	—	—	—	—	11·42

Mean of Analyses and Theory of Formula.

	Per cents.	÷ At. Wts.	÷ P = 1	÷ N = 1.		Theory.	
C	43·825	3·652	43·73	42·	C_{44}	528	
H	7·70	7·70	92·2	88·	H_{92}	92	
N	2·43	0·1735	2·07	2·	N_2	28	839
P	2·59	0·0835	1·	0·96	P	31	
O	14·045	0·8775	10·5	10·	O_{10}	160	
Cd	17·99	0·1606	1·92	1·84	Cd_2	224	366
Cl	11·42	0·321	3·84	3·70	Cl_4	142	
	100·000					1205	

$C_{44}H_{92}N_2PO_{10}(CdCl_2)_2$ requires 30·37% $CdCl_2$.
found 29·41% „
$C_{44}H_{92}N_2PO_{10}CdCl_2$ requires 17·90% „

Preparation of free Amidomyelin from the Cadmium Chlorie Compound.

(*a.*) *By the hydrothion process.*—The cadmium chloride salt described in the foregoing is finely powdered, suspended in spirit, and the mixture is saturated with hydrothion at the ordinary temperature. It is then heated in a water-bath until the spirit boils, while the introduction of the sulphuretted gas is continued until the cadmium is all transformed into the yellow sulphide. When a filtered sample of the solution is no longer altered by hydrothion, the whole is isolated by filtration on a heated funnel. On cooling it crystallises, the quicker the more concentrated it is. After 24 hours standing the crystals are collected, washed with spirit and pressed, re-dissolved in a minimum of spirit (in which, before dissolving, they melt into an oil), and again allowed to crystallise. This process is repeated until crystals and mother-liquor are both perfectly colourless. In this process there is the danger that some of the amidomyelin is decomposed under the influence of the four molecles of hydrochloric acid which are set free by the decomposition of the cadmium chloride. This chemolysis may yield some fatty acid, which may remain mixed with the amidomyelin, and is difficult to remove. In consequence, the carbon and hydrogen of the free body may be found higher than the theory derived from the salt. The free body also retains some hydrochloric acid, in the first instance, less than one per cent. (found 0·93% Cl), which diminishes to a trace by repeated crystallisation from spirit. But to remove this hydrochloric acid entirely requires a circumstantial process and the employment of silver oxyde or mercuramin, and, again, hydrothion and frequent re-crystallisation.

(*b.*) *By dialysis.*—The cadmium compound is suspended in water, and placed in a corrugated piece of vegetable parchment, folded like a plaited filter, and placed inside a funnel. The funnel is closed with a cork, or some kind of tap, at its lower aperture, and the space between

the funnel and parchment is filled with distilled water. This is renewed as long as it contains cadmium chloride, indicated by sulphide of ammonium and nitrate of silver. *The amidomyelin is at last found to be completely dissolved in the water*, and the solution can be filtered clear through the densest filtering paper. When this solution is gently warmed it sets into a jelly. This latter may be evaporated on the water-bath with constant stirring to near dryness. The residue is dissolved in hot spirit, the solution treated with hydrothion to remove a trace of cadmium, and allowed to cool and stand. White amidomyelin crystallises, to be purified by recrystallisation, &c., as above described.

(*c.*) *From the acid mother-liquors*, filtered from the crystallised amidomyelin, the hydrochloric acid is removed by mercuramin, added in fine powder with stirring and warming. When the powder does not any longer change colour, but remains of its canary yellow colour, all the acid is precipitated. The solution is filtered warm, and yet warm treated with a little hydrothion to remove the trace of mercuramin which is dissolved in the hot spirit. It is then concentrated and allowed to crystallise; or if coloured, it is mixed with cadmium chloride solution, and the washed cadmium chloride compound is treated anew as above described.

Properties of Amidomyelin.

Amidomyelin crystallises in snowy white microscopic plates and needles, arranged in stars, and disposed in irregular masses. They dry in vacuo over oil of vitriol to a perfectly white mass, which is easily powdered, and can be dried in the water-oven below 100°. With sugar and oil of vitriol amidomyelin gives the purple of Raspail's reaction rather quickly and deeply; it is at present not known whether the reaction is due to the presence of the oleyl, cholyl, or sphingosyl radicle in the molecle of the amidomyelin. The remarkable solubility of the freshly dialysed amidomyelin in cold pure water, and insolubility in slightly warmed water, must again be pointed out. The change which it undergoes when its watery solution is warmed is permanent; the jelly produced by warmth does not re-dissolve on cooling. This phenomenon is of great importance in the study of the functions of the immediate principles in the brain; it is calling for further investigation, and comparison with the bearing of the other phosphatides under similar conditions. One of these, not yet accurately identified, has the property of being slimy and diffused and unfilterable in cold water, while becoming hard and contracted in boiling water, so that the water can be filtered off. This substance, with fresh cold water, gradually resumes the slimy immensely hydrated condition.

Theory of Amidomyelin (Ox) as deduced from its Cadmium Chloride Compound, and Comparison with the Theory of Sphingomyelin (Apomyelin).

Taking the organic molecle from the analysed $CdCl_2$ salt, with 29·42% $CdCl_2$, namely, 70·59%, and calculating elements for 100, we get—

	For Amidomyelin—				Sphingomyelin gives— $C_{52}H_{104}N_2PO_9 + H_2O$.		
	Per Cents.	÷ At. Wts.	Atoms.	At. Wts.	Per Cents.	Atoms.	
C	62·15	5·179	44	528	68·37	51·86	624
H	10·93	10·93	92	92	11·29	107·52	106
N	3·37	0·24	2	28	2·96	2·	28
P	3·65	0·117	1	31	3·24	1·	31
O	19·90	1·24	10	160	17·14	10·2	160
				839			949

Diagnosis and Separation of Amidomyelin from Sphingomyelin.

Elementary analysis, with special regard to the relations between N, P, and C is as yet the only means of establishing a diagnosis between these two principles. It is satisfactory that in the first steps of brain extraction they separate in the main, amidomyelin remains with paramyelin and lecithin, while sphingomyelin remains with the cerebrosides and cerebrinacides. But the analyses of sphingomyelin in early stages of purification make it probable that it is mixed with a mononitrogenised phosphatide as insoluble in cold spirit as itself, a body closely resembling or identical with paramyelin. From paramyelin, we know from these researches, amidomyelin is easily separated by the benzol process applied to cadmium chloride salts. This process will therefore aid to separate paramyelin from sphingomyelin also. But at the time of the composition of this report it had not yet been possible to exactly fix the bearing of sphingomyelin and its cadmium chloride salt towards benzol, nor to establish its absolute diagnosis and absolute separation from amidomyelin when both occur in a state of admixture with each other. Neither was there time or material for the study of the chemical constitution of amidomyelin by means of the chemolytic method, which I have shown abundantly in the course of these researches to be the only means for obtaining precise final knowledge regarding the atomic composition and weight of these marvellous ingredients of the brain, nerves, and protoplastic centres.

(5.) On Sphingomyelin, a new Immediate Principle of the Brain, Type of the diamidated Phosphatides, which contain no Glycerol; its Isolation, Analysis, Chemolysis, and Compounds.

In chemical researches which have to deal with the separation of the ingredients of complex mixtures, the difficulties generally rise with the atomic weights of the bodies to be treated. Of this rule, sphingomyelin, a body the atomic weight of which is probably one of the highest after those of the albuminous class, has furnished a striking confirmation.

Sphingomyelin is the principal, but not the only, phosphorised ingredient of the so-called cerebrin mixture, which remains when white matter is exhausted by ether. I may remind the reader that this mixture, after one or two crystallisations from spirit, is termed "protagon" by a few writers who are unable to appreciate the true state of affairs. Apart from the direct proofs which have dispelled the theory of "protagon," and have shown it to be a mere fallacy, we have now the great facts, that out of this mixture there have been isolated entire series of immediate principles: first and best studied, the *cerebrosides*, with *phrenosin* as their chief; secondly, the *cerebrinacides*, which contain more oxygen than the former, and combine with lead; thirdly, bodies containing sulphur as an essential ingredient, hence termed *cerebrosulphatides*. To these we have now to add the description of *peculiar phosphatides*, which contain the phosphorus and part of the nitrogen erroneously believed to be elementary components of the immediate principle "protagon" and certain nitrogenised substances free from phosphorus, which may be termed *nitrogenised fats* or *amidolipotides*. The processes described in the following are those which actually led to the discoveries by which they were rewarded. But it is probable that, after a complete knowledge of the properties of the newly discovered bodies has been obtained, these processes may be much simplified and shortened.

App. B. No. 3.

Further Researches on the Chemical Constitution of the Brain; by Dr. Thudichum.

Process of separating apparently homogeneous Crystallised Bodies from the Alcohol used for the separation of the Cerebrosides; which Bodies will be shown to be Mixtures by reagents.

After the removal of phrenosin and kerasin by crystallisation from absolute alcohol frequently repeated, there remained alcoholic solutions, which made no further deposit on standing. These were distilled to a small bulk, and deposited a white crystallised matter. (An attempt to separate anything out of the matter by benzol proved abortive; cold benzol extracted but little, on application of heat all dissolved, and on cooling the mixture set into an unmanageable jelly. The benzol was therefore distilled off and the matter treated anew with spirit.) The crystalline matter was dissolved in hot spirit of 85°/₀ strength, and an alcoholic solution of lead acetate was added, after this a slight excess of ammonia. The cerebrinacides contained in the body were thus precipitated as lead salts. From these the solution was separated hot by filtration. After cooling, the alkaline mother-liquor was separated from the crystalline deposit. The washed crystalline mass was dissolved in hot spirit, and left much matter in a fused state (second lead stearoconote). A part of the matter, being yet insoluble lead compound, should remain undissolved, but when fused it encloses a quantity of soluble matter, which then remains inaccessible to the spirit. It has been found useful to emulge the crystalline matter with some water, before heating it with spirit. This resolution in hot spirit and re-crystallisation are repeated four times, or until no lead salt remains insoluble, and until the product is uniformly white, and crystallised in stars and rosettes of needles, clearly visible under the microscope. It is dried in vacuo.

Properties of the Product.—With water it forms a permanent jelly or paste like starch pap. With sugar and sulphuric acid it gives an immediate purple reaction; with sulphuric acid alone it becomes thoroughly purple. Heated to 90° to 100° in a wateroven it becomes a little soft and a little coloured; when cold it becomes again pulverisable. It fuses at about 150°, assuming a brown colour. It yields to absolute ether-alcohol a considerable amount of matter, which crystallises in the original rosettes and branched masses, like lycopodium.

Preliminary Elementary Quantations.

(1.) 0·6605 dried at 90°, gave 0·0529 $Mg_2P_2O_7$ = 2·24°/₀ P.
(2.) 0·6481 gave 0·1201 Pt = 2·63°/₀ N.
(3.) 0·5131 gave 1·1064 CO_2 = 58·81°/₀ C, and 0·5336 H_2O_1 = 11·55°/₀ H.
(4.) 0·6286 gave 0·6633 H_2O_1 = 11·72°/₀ H.

Synopsis of Results.

Found in 100.	÷ At. Wt.	÷ P = 1.
C 58·81	4·900	68·05
H 11·55	11·55	160·40
N 2·63	0·188	2·61
P 2·24	0·072	1·
O 24·77	1·548	21·50

These data show that the body, though crystallised as described, was yet a mixture. Its principal ingredients were *sphingomyelin*, in which P : N = 1 : 2, and *kerasin*, which latter mainly explains the excess of carbon and nitrogen and attached water, as will be shown below.

Comparison with this Rosette or Lycopodium-like Body of a similar Body obtained from the Cerebrin Mixture by Ether, together with the Kephalin, &c.

The ether extracts from white matter containing all kephalin, myelin, cholesterin, &c., were concentrated and mixed with an alcoholic solution of lead acetate. Kephalin and myelin became insoluble as lead salts. When the precipitated matters were boiled with spirit, and the filtrate was allowed to cool, cholesterin, together with a lead compound and the new body were deposited. The deposit was isolated, dried and extracted with ether not in excess. Cholesterin dissolved, while the lead salt and new body remained undissolved. The latter mixture was treated with boiling alcohol, which dissolved the new body, and deposited it on cooling in crystalline rosettes, while the lead salt remained undissolved as a fused mass. By frequent re-crystallisation of the new body as long as it left any fused lead-compound, it was at last obtained quite free from lead, and white.

Chemical and Physical Properties.—White crystalline mass. Becomes soft at 90°, without loss of water. Gives Raspail's reaction with and without sugar, from which the presence of a cerebroside may be inferred. The lead compound gave the Raspail reaction with and without sugar, if at all, very indistinctly.

Analyses of the Rosette Body.

(1.) 0·3918 gave 0·0186 $Mg_2P_2O_7 = 1·33\,\%$ P.
(2.) 0·4268 gave 0·9182 $CO_2 = 58·67\,\%$ C, and 0·4294 $H_2O = 11·18\,\%$ H.
(3.) 0·1371 gave 0·0268 H = 2·78% N.

Synopsis of Results.

	Per Cents.	At. Wt.	÷ P=1.
C	58·67	4·889	119
H	11·18	11·180	272
N	2·78	0·198	4·82
P	1·33	0·041	1·
O	26·04	1·627	39·5

It will be seen that the empirical formula of this mixture is very similar to the formula which Liebreich gave for his "protagon," namely, $C_{116}H_{241}N_4PO_{22}$, but like this, it is only the formula of a mixture; the ingredients of this mixture are, however, by no means identical with those of the "protagon" mixture, as is already evident from this, that they were soluble in much ether, in which "protagon" is insoluble. In fact the crystallised body just analysed is a mixture of a dinitrogenised phosphatine, *sphingomyelin*, with *a cerebroside*, as was clearly shown by the application of reagents. But the nature of the cerebroside in this case was not ascertained as in the former case.

Isolation of Sphingomyelin by Cadmium Chloride Process.—Many attempts (of which only two have been described in the foregoing) having been made to isolate a constant product by mere crystallisation with solvents, without success, the cadmium chloride process, already described in previous researches, was again adopted. The reagent was mainly applied to cold alcoholic solutions, and had the following effect. A precipitate of $CdCl_2$ salt ensued immediately. If this was filtered off quickly, a second more gelatinous precipitate fell, consisting of almost pure kerasin. The $CdCl_2$ salt also contained yet some kerasin. From this it was separated by boiling spirit; the $CdCl_2$ salt was

deposited mainly above 28°, the kerasin entirely below 28°, and on long standing provided that the amount of kerasin did not rise above 1 part in 321 parts of spirit. Of the $CdCl_2$ salt spirit retains less than half a per cent. (weight in volume) in solution. It is probable that the body or bodies which combine with $CdCl_2$ (sphingomyelin and other phosphatides) on the one hand, and kerasin on the other hand keep each other in solution by some attraction which they have for each other, in which sphingomyelin acts as base, kerasin as acid, the result being a kind of salt, which is more soluble in spirit than each of its components by itself. The alcoholic solution from which the $CdCl_2$ salt and kerasin have been precipitated, must be allowed to stand long, and be repeatedly concentrated, to remove all kerasin. It then yields a precipitate with platinum chloride and hydrochloric acid, which is a compound of a phosphorised and nitrogenised body, *assurin*, with the reagents employed. The mother-liquor yields *krinosin and bregenin*, nitrogenised matters free from phosphorus, and belonging to the new class of *amidated lipotides* or *nitrogenised fats*, as will be fully described lower down.

Gradual Purification of the $CdCl_2$ Salt of Sphingomyelin by re-crystallisation from boiling Spirit and Extraction with boiling Ether.

In the course of these processes it was found that the precipitates might contain varying quantities of $CdCl_2$, and that these might correspond to several compounds. Sphingomyelin might combine with one or two molecles of $CdCl_2$; the second phosphatide might combine with one molecle of $CdCl_2$ only, being a mononitrogenised body, probably paramyelin. The $CdCl_2$ might also be depressed by the admixture of kerasin. It was also found that the $CdCl_2$ would shift, so as to increase in one fraction, while diminishing in another of a previously unitary preparation.

The changes of these salts in general, and the extraction of the kerasins and other admixtures in particular, were followed analytically. Thus a CdCl salt gave the following data:—

(1.) 0 5698 fused with nitre in tube, &c. gave 0·13756 AgCl = 0·03402 or 5·97 % Cl; also 0·07096 CdO = 0·06209 or 10·89 % Cd = 16·86 % $CdCl_2$. The 5·97 % Cl require in theory 9·41 % Cd = 15·38 % $CdCl_2$. The salt here obtained was the one with one molecle of $CdCl_2$; sphingomyelin with 51 carbon atoms and $CdCl_2$ postulates 16·4 % $CdCl_2$; the body with 53 carbon atoms requires 15·98 % $CdCl_2$.

Another salt from ox cerebrosides mother-liquor of re-crystallisation was a mixture of sphingomyelin $CdCl_2$ in which N : P = 2 ; 1, and of a phosphatide $CdCl_2$ salt, in which N : P = 1 : 1, probably paramyelin. The salts were crystallised from hot spirit above 30°, and re-crystallised until free from kerasin.

Quantations.—(1.) 0·5632 gave 0·0846 CdO, equal to 13·14 % Cd, and 0·0654 Mg pyrophosphate = 3·24 % P; and 0·2078 AgCl = 9·12 % Cl.

(2.) 0·2762 burnt with soda lime, &c. gave 0·0442 Pt = 2·28 % N.

(3.) 0·5482 burnt with chromate gave 1·0192 CO_2 = 50·70 % C, and 0·4482 H_2O, equal to 9·08 % H.

The chlorine found in analysis (1) postulates 14·3 % Cd. There is, therefore, a slight deficiency of this element. The organic molecle has

therefore to be calculated by deducting the latter larger figure for Cd, namely, 14·3 °/₀ thus:—

$CdCl_2$ - - -	23·42 °/₀
Organic molecle - -	76·58 „
	100·00

This quantity of $CdCl_2$ indicates that the mixture contains sphingomyelin monocadmium chloride with sphingomyelin dicadmium chloride, bodies which will be discussed more explicitly lower down. The nitrogen is to the cadmium chloride in such a proportion that the basicity of sphingomyelin is unsatisfied to the extent of about one quarter, or upon two atoms of nitrogen there is very nearly one and a half molecle of cadmium chloride (1·48).

Synopsis of the foregoing Analytical Results,

	Per Cents.	÷ At. Wt.
C	50·70	
H	9·08	
N	2·28	0·162
P	3·24	0·104
O	11·28	
Cd Cl_2	23·42	
	100·00	

Calculation of Elements in 100 *of Organic Molecle.*

	Per Cents.	÷ At. Wt.	÷ N = 2.
C	66·21	5·5175	51·8
H	11·86	11·860	111·2
N	2·98	0·213	2·
P	4·23	0·136	1·26
O	14·73	0·921	8·64

The relation of C : N are the same as those of the same elements in the crystallised free body, which will be described lower down. Consequently the phosphorus is somewhat too high.

Further purification of the Compound by Ether, and by re-crystallisation.—The mixture was now subjected to a process of purification by being exhausted in a closed apparatus with boiling ether. When new ether failed to extract anything during an entire day of boiling, the compounds were re-crystallised from spirit, again dried, and again exhausted with ether. If now fresh ether extracted nothing, the salts were considered to be fully exhausted. (Some krinosin and bregenin were extracted.) In this manner a number of preparations were purified, with the result that in all the carbon sank a little, while cadmium chloride rose in quantity, but nitrogen remained to phosphorus as 2 : 1·28, as will be seen from the following analysis.

Quantation of Elements in $CdCl_2$ Salts from Ox Cerebrosides, No. 1, *after exhaustion with boiling Ether, dried at* 98°.

(1.) 1·1561 were deflagrated with flux in a tube and gave 0·1332 magnesium pyrophosphate, equal to 3·22 °/₀ P.
(2.) 1·1561 gave 0·4566 °/₀ AgCl = 9·77 °/₀ Cl.
(3.) 1·0070 gave 0·1591 Pt = 2·24 °/₀ N.
(4.) The same salt also gave 46·11 °/₀ C and 8·66 °/₀ H.
(5.) The Cd amounted to 15·63 °/₀.

Synopsis of Quantations and Theory of Salt.

	Per Cents.		÷ At. Wt.
C	46·11		3·84
H	8·66		8·66
N	2·24		0·160
P	3·22		0·104
O	14·37		
Cd	15·63	25·40	
Cl	9·77		

Elements and Theory of Organic Matter.

	Per Cents.	÷ At. Wt.	÷ N = 2
C	61·80	5·15	48·5
H	11·60	11·60	—
N	3·00	0·214	2·
P	4·31	0·139	1·28
O	19·29	1·205	—

We have therefore here also the phosphorus too high for sphingomyelin, namely, N : P = 3 : 2, from which it may be surmised that the admixture was partially a mononitrogenised phosphatide (paramyelin ?) partly a diphosphatide such as will be described lower down.

The $CdCl_2$ salt No. II. was extracted with ether and dried at 100°, when it became slightly coloured.

Analysis.—0·7546 gave 0·0856 pyrophosphate of magnesium, equal to 3·17% P. This is very near the quantity yielded by the first salt.

The $CdCl_2$ salt No. III. was extracted with ether and dried at 100°, and also became slightly coloured.

Analyses.—(1.) 0·7221 gave 0·1102 Pt = 2·18% N.

(2.) 0·4688 gave 4·0640 magnesium-pyrophosphate equal to 3 81% P.

While therefore the nitrogen corresponded to that in salt No I., the phosphorus was higher than in salts No. I. and No. II.

As no even relation between nitrogen and phosphorus could be obtained by any kind of treatment, particularly frequent re-crystallisation, to which the compound was subjected, it was deemed necessary to decompose it and study the free body. It was evident from the relation C : N = 51·8 : 2 that the organic body was not a phosphatide of the lecithin group, in which C : N = 42 : 1, or thereabouts, while the amount of nitrogen pointed to the probability that the body was constituted similarly to the amidomyelins which had been hypothetically assumed to exist in analysed $CdCl_2$ and $PtCl_4$ compounds. In fact it was at once perceived to present the proportions between C and N which had been observed upon *apomyelin* described in my first research on the brain. But as it had been left doubtful whether this apomyelin was not a product rather than an educt, great care was taken to prevent any chemolytic influence from acting on the body, so that the doubt just mentioned might be eliminated. The crytallisation of the free substance showed at once the presence of *two principles*, of which the first, *sphingomyelin*, was obtained pure by crystallisation, while the second one was obtained pure by more circumstantial processes to be described later.

Preparation of pure Sphingomyelin from its Cadmium Chloride Compound.

Removal of the Cadmium by Diffusion and Dialysis.—When the compound is placed in water this will extract much of the $CdCl_2$, but not all, by dissociation and diffusion. But the liberated sphingomyelin

is in the state of colloidation, which increases with the length of contact with water until it reaches its maximum. The liquid can thus no longer be filtered from the sphingomyelin, as the latter immediately obstructs the pores of the filter.

Dialysis may be resorted to, the apparatus being arranged with plaited vegetable parchment dialysers as described in a former chapter. When the dialysate is free from $CdCl_2$ the sphingomyelin and water paste must be concentrated, dissolved in hot spirit, treated with hydrothion to remove the last portions of cadmium, and set to crystallise.

The sphingomyelin which was examined in the first four analyses to be related below, was prepared with the aid of dialysis as follows:—40 g $CdCl_2$ salt was boiled with 1 l spirit, 23 g dissolved, while 13 g remained insoluble in the quantity of spirit mentioned. The hot spirit solution deposited a quantity of salt above 30° and was filtered at 30°. The salt thus obtained was subjected to dialysis and washed with water until free from chlorine. It was then re-crystallised from spirit and dried at 100°.

The liquid which had deposited the $CdCl_2$ salt above 30 was evaporated, and the deposit filtered off. It was also decomposed with water, and the body free from $CdCl_2$ was analysed. It yielded results which have been recorded separately. If my object were solely that of a mere chemist in search of new pure compounds, I should have thrown this and other mother-liquors away. But the object of physiological and pathological research is not to find some principles which will pay the chemical operator, but *to find all the principles* which may be contained in an organic physiological or pathological mixture.

The following process yields sphingomyelin in a shorter time than dialysis. The purified salt, free from kerasin and all matters which ether can extract, is suspended in spirit, and treated with hydrothion to saturation. The flask containing the mixture is now placed in a water-bath, the water of which is gradually raised in temperature, until the spirit in the flask boils. The influence of the sulphuretted gas is continued until a filtered sample of the spirit solution is not changed by the hydrothion any more. The mixture is now filtered through paper in a funnel kept hot by a steam-jacket. The filtrate is left to crystallise. It yields sphingomyelin, &c., partly as hydrochlorate, which are collected on a filter, washed with spirit, pressed between bibulous paper, and dried in vacuo over oil of vitriol. The neutral and dry salts are now again dissolved in warm spirit, and to the solution is added gradually and in small finely pulverised quantities as much mercuramin as may be necessary to bind and retain in the precipitate all the hydrochloric acid combined with the phosphatides. When an excess of mercuramin is present, *i.e.*, when the deep canary yellow colour of the mercuramin is no longer changed to white, but remains as a yellow deposit at the bottom of the flask, distinct from the white mercuramin hydrochlorate, then the organic principles are free from hydrochloric acid; the filtered solution, on cooling, deposits, first, sphingomyelin, to be purified by re-crystallisation; the concentrated mother-liquor deposits the mononitrogenised companion mainly. (Without the mercuramin treatment the sphingomyelin may retain from 0·8 to 1·32 % HCl.)

Physical and Chemical Properties of Sphingomyelin.—Sphingomyelin is easily soluble in hot spirit or absolute alcohol, and crystallises therefrom in dense white masses, needles, stars, and hexagonal plates. It does not become waxy after drying, but retains a pulverulent dryness. It is little soluble in cold absolute alcohol, but can be separated thereby from phrenosin, which is less soluble, and from lecithin, which is more soluble. It is almost insoluble in ether even when some hydrochloric

acid has been added. It cannot be separated from kerasin, to which it stands in the relation of a base, by re-crystallisation alone. The intervention of cadmium chloride is necessary to effect this separation. The compound of sphingomyelin with cadmium chloride is less soluble in spirit than the pure sphingomyelin, and is deposited in a much shorter time and at higher temperatures than kerasin. For the sphingomyelin $CdCl_2$ falls above 28°, kerasin (in solutions which contain less than 1 g in 321 c.c. of spirit of 84 %) below 28°, on standing. Sphingomyelin swells in water and becomes distributed in it so as to form a turbid semisolution or emulsion. In the course of dialysis it sometimes contracts and sinks in the water. Its compounds, particularly those with $CdCl_2$, become decomposed under the influence of water; sphingomyelin assumes the colloid form, and the combined metals or salts pass into solution in the water. On this property rests the process for liberating sphingomyelin from crystalloids by dialysis.

Quantations of Elements in Sphingomyelin from Ox Brain.

(1.) 0·7649 gave 1·8336 CO_2 = 65·37 % C, and 0·7770 H_2O = 11·29 % H.

(2.) 0·5602 gave 0·1169 Pt = 2·96 % N.

(3.) 0·9942, gave 0·1154 $Mg_2P_2O_7$ = 3·24 % P.

Synopsis of Analyses and Theory.

	Per Cents.	At. Wt.	÷P = 1.
C	65·37	5·445	51·86
H	11·29	11·29	107·52
N	2·96	0·211	2·
P	3·24	0·105	1·
O	17·14	1·070	10·2

The probable formula is $C_{52}H_{104}N_2PO_9 + H_2O$.

Comparison of Sphingomyelin with Apomyelin from Human Brain.

In Reports No. III. (1874) p. 164, I have given the analysis of a specimen of a kind of myelin from the human brain which I termed *Apomyelin*, and which had been obtained from a platinic chloride compound by re-crystallisation from boiling alcohol, and decomposition of the product by hydrothion. The following figures were given:—

Apomyelin, Man.

	Per Cents.	÷ At. Wt.	÷ P = 1.
C	67·01	5·5841	54
H	11·35	11·35	109
N	3·00	·2142	2
P	3·23	·1041	1
O	14·694	·9155	9
Cl	0·761		

This was therefore clearly a sphingomyelin with 54 C; like the sphingomyelin from the $CdCl_2$ compound, it retained a small quantity of hydrochloric acid, which was estimated in the analyses and recorded as Cl. A sphingomyelin prepared from $CdCl_2$ salt, by H_2S, was found to retain 1·32 % HCl, which is only about a third of the theoretical amount required by a simple hydrochlorate. In both cases the hydrochlorate was probably decomposed by the influence of watery solvents.

Chemolyses of Sphingomyelin, with a view of ascertaining its Chemical Constitution.

I have made four distinct experiments on this subject, but as they are not completed, I am only able to state the salient results of the operations as far as they go.

Experiment I.—6 g sphingomyelin were mixed with 12 g baryta hydrate and heated to 105° during five hours. There were obtained a little *sphingosin* (precipitated from the alcoholic extract by sulphuric acid, soluble in excess), an acid which differed from sphingomyelin by the absence of the group of *neurin*, *sphingomyelic* acid, probably (if the sphingomyelin employed had the formula $C_{83}H_{106}N_2PO_{12}$) having the composition $C_{48}H_{95}NPO_{12}$. In this acid it will be observed P : N = 1 : 1. There was further obtained a *barium salt, soluble in ether*, and an alcohol *sphingol*, the two latter bodies being products of the continued decomposition of a portion of sphingomyelic acid.

Experiment II.—12 g sphingomyelin and 12 g baryta and 50 g water were heated to 100° for 10 hours. There were obtained 1·1 g of neurin as platinic chloride salt, while theory requires 1·3 g from 12 g sphingomyelin. *No trace of glycerophosphoric acid was observed.* There was a barium salt insoluble in alcohol and ether, which contained P : N = 1 : 1·02 (P = 2·75 °/₀; N = 1·27°/₀) sphingomyelate of barium. No sphingosin was obtained. But the new alcohol, *sphingol*, was isolated in sufficient quantity to be analysed.

Analysis of Sphingol, a new Alcohol, from Sphingomyelin by Chemolysis with Baryta.

Dried at 98° in a platinum boat.

(1.) 0·2576 g burnt with lead chromate gave 0·7207 CO_2 = 76·30 °/₀ C, and 0·2962 H_2O = 12·78 °/₀ H.

(2.) 0·2908 burnt in a platinum boat, with lead chromate and oxygen gave 0·8171 CO_2 = 76·34 °/₀ C, and 0·3259 H_2O = 12·45 °/₀ H.

Synopsis of Analyses and Theory.

		Per Cents.	÷ At Wt.	÷ by O = 1.
(1.)	C	76·30	6·37	9·07
	H	12·78	12·78	18·7
	O	10·92	0·68	1·
(2.)	C	76·34	6·361	9·08
	H	12·45	12·45	17·92
	O	11·21	0·7	1·

The new alcohol has therefore the composition expressed by either $C_9H_{18}O$, or by $C_{18}H_{36}O_2$. In the latter case it would be the fourth stearic isomer.

Analysis of the Neurin-Platinum-Chloride Hydrochlorate obtained from this Chemolysis.

The salt $C_{10}H_{26}N_2O_2$, 2 HCl, $PtCl_4$, of atomic weight 618·4

	Requires in 100.	Found in Salt.
Pt	31·921	31·79
Cl	34·44	34·64

Experiment III.—20 g sphingomyelin and 40 g baryta, with 500 g of water were heated to 135° during 12 hours. There were obtained *neurin*; further a second *alkaloid* precipitated by sulphuric acid from its solution in absolute alcohol, yielding as sulphate by analysis the formula 2 ($C_{20}H_{41}NO_2$) H_2SO_4, being possibly somewhat impure sphingosin; sphingol; a fatty acid, which as barium-salt and as lead salt was insoluble in alcohol and in ether, in the free state had the composition expressed by the formula $C_{18}H_{36}O_2$, crystallised, and fused at 57°, therefore almost

as much below ordinary stearic acid, which fuses at 69·5°, as neurostearic acid fuses above this, namely, at 84°. The acid is therefore the third isomer of stearic acid, and is named *sphingostearic acid.*

No glycerophosphoric acid was obtained, but the insoluble barium salt contained much *barium phosphate*, which was isolated; the phosphoric acid was combined with molybdate of ammonium, and fully identified.

Experiment IV.—25 g sphingomyelin, 50 g. baryta, and some water were heated in the autoclave to 105°—120° for 17 hours. There were again obtained neurin, sphingosin, sphingol, barium salt insoluble in ether, and a neutral body mixed with sphingol; this latter mixture or compound had the formula $C_{35}H_{81}NO_5$, with 2·18 N.

Some intermediate, in quantity subordinate, products, such as a barium salt soluble in ether and precipitable by alcohol remain for further study.

Theoretical Results of these Chemolyses.

The conclusions to be derived from these chemolyses bearing upon the chemical constitution of sphingomyelin are of the utmost interest and importance.

(1.) In the first place no glycerophosphoric acid was obtained in any one of the chemolyses. If I recall the many experiments made regarding the constitution of other phosphatides, such as of kephalin or of lecithin, and the relative facility with which glycerophosphoric acid was isolated as barium salt and identified as calcium salt, I cannot suppose for a moment that glycerophosphoric acid has been present and escaped observation. I therefore came to the conclusion that the glycerol found in a portion of the phosphatides was not, as had been hitherto supposed, essential to the composition of those bodies. From this moment it was also evident that glycerol could not, or need not, be the basal radicle of these compounds, not even of those which contained it, and that therefore the phosphorised brain educts could no longer be considered as glycerides, or ethers of the alcohol glycerol, but had to be differently interpreted. The only feature common and essential to all the phosphorised educts, and the one from which in consequence they derived their appellation, was that they contained phosphorus, which by ordinary analytical processes remained in the form of phosphoric acid. There was no reason to suppose that the phosphorus was present in the organic principles in any other form than that of phosphoryl, the radicle of phosphoric acid. (When they were chemolysed they took up water, and yielded hydrated radicles, such as have been described, acids, alkaloids, or organic bases, and alcohols.) Consequently I assumed that *the basal radicle of all phosphatides was that of phosphoric acid; that in this acid one, two, or three molecles of hydroxyl might be replaced by radicles of alcohols, acids, or bases, and that to a molecle formed by three such substitutions there might yet be attached, by substitution of an element in a radicle, itself already substituted* (side-chain) *or by addition as anhydride, a fourth radicle,* and that therefore sphingomyelin might be constituted according to the following formulæ :—

$$\text{Phosphoric acid} = OP\begin{cases} HO \\ HO \\ HO \end{cases}$$

$$\text{Sphingomyelin} = OP\begin{cases} \text{Acid radicle.} \\ \text{Alcohol radicle.} \\ \text{Base radicle (substituted).} \\ \text{Base radicle (attached as side-chain or added as anhydride.)} \end{cases}$$

I repeat the formula, substituting elementary formulæ for the functional symbols :—

$$OP\left\{\begin{matrix}C_{18}H_{35}O_2\\C_{18}H_{35}O_2\\C_{17}H_{34}O_2N\\C_5H_{11}N\end{matrix}\right\} = C_{58}H_{115}N_2PO_7$$

To this formula we are obliged, by the results of the analyses of the free sphingomyelin, to add at least $2\,H_2O$, perhaps $3\,H_2O$, and by this operation we obtain a total formula of $C_{58}H_{121}N_2PO_{10}$.

But this last formula is only a case out of many possible formulæ. It is clear that if the molecular formula of sphingol were only $C_9H_{18}O$, the formula above given would either have to be lowered to C_{49}, &c., or the sphingol would have to be assumed to be doubly represented. Neither hypothesis enjoys the advantage of probability. I therefore do not presume to fix the exact formula of sphingomyelin, particularly as I have shown that there are various sphingomyelins, (one being apomyelin), but I maintain that this research has established as a type of brain educts sphingomyelin, which is a phosphatide, and contains an alcohol not being glycerol, an acid, and two nitrogenised radicles as proximate constituents.

Compounds of Sphingomyelin—The body combines with *hydrochloric acid*, and this compound is more soluble in spirit than the free body. The hydrochlorate is easily dissociated by watery solvents, so that while a monohydrochlorate should contain $3{\cdot}76\,\%$ HCl, there were found in a hydrochlorate re-crystallised from spirit only $1{\cdot}32\,\%$ HCl.

Compounds of Sphingomyelin with Cadmium Chloride.—The varying quantities of cadmium chloride in such compounds have been a source of great trouble and doubt, which could only be solved by countless preparations and analyses by the hand of hypotheses and the atomic theory. Thus a salt was found to contain $16{\cdot}86\,\%$ $CdCl_2$, and to correspond to the formula $C_{51}H_{99}N_2PO_{10}CdCl_2$, which requires $16{\cdot}4\,\%$ $CdCl_2$.

Another salt from the human brain contained $26{\cdot}59\,\%$ $CdCl_2$, and was therefore supposed to be a not quite saturated compound approaching that with two molecles of $CdCl_2$. For the C_{51} sphingomyelin with $2CdCl_2$ requires $28{\cdot}\%$ $CdCl_2$; the formula with C_{52} requires $27{\cdot}9\,\%$ $CdCl_2$.

Sphingomyelin is therefore, like amidomyelin, a dipolar alkaloid, and capable of fixing one molecle of $CdCl_2$ to each of its two nitrogen radicles.

Consequently any sphingomyelin and $CdCl_2$ compound which contains quantities of $CdCl_2$ intermediate between $16{\cdot}4\,\%$ and $28\,\%$ is a mixture of the monocadmium chloride, with the dicadmium chloride compound. Such a compound must of course contain $P : N = 1 : 2$. Where these relations do not subsist, but where the relations of $P : N$ approach more or less those of $2 : 3$, the cadmium chloride may be diminished by the presence of a compound with it of a phosphatide such as paramyelin, in which $P : N = 1 : 1$. It will therefore be seen that the higher the amount of $CdCl_2$ found in a new precipitate, the more likely is the body to contain sphingomyelin (or amidomyelin). If the $CdCl_2$ sinks much towards $20\,\%$ or below, the precipitate or crystallisation either contains much of the monocadmium chloride compound, or contains a mononitrogenised body, which may be either a body analogous to sphingomyelin, but containing one nitrogenised radicle only, or a lower phosphatide such as lecithin or paramyelin.

We have therefore, with regard to sphingomyelin, the possibility of the existence of two compounds and an indefinite number of their mixtures in different proportions:

$C_{51}H_{99}N_2PO_{10} + CdCl_2$, At. W. = 1113 contains 16·4 % $CdCl_2$.

$C_{51}H_{99}N_2PO_{10} + 2(CdCl_2)$, At. W. = 1296 contains 28 % $CdCl_2$.

If there are, as is probable, many sphingomyelins, then each variety would have its several $CdCl_2$ compounds.

All these $CdCl_2$ salts are beautifully crystallised and white. When they are re-crystallised from spirit they lose solubility as the extraction proceeds. These changes are particularly observed upon salts which are not fully saturated with $CdCl_2$: the fully saturated salts behave in a regular and stable manner. It is therefore necessary in the first crystallisation to offer to sphingomyelin an excess of cadmium chloride, and to test the mother-liquors of re-crystallisation from time to time to see that they do not contain unsaturated more soluble salt or free sphingomyelin in solution. Spirit of 85 % strength, after having been saturated boiling with the dicadmium chloride salt and allowed to deposit all it can during 24 hours, will keep in solution half a gramme of the salt in 100 cubic centimètres.

(6.) On Assurin, a new Immediate Principle of the Brain, Type of the Diamidated Diphosphatides; its Isolation and Analysis.

This body is found in the alcohol extracts of the cerebin mixtures after sphingomyelin and kerasin have been removed from them in the manner above indicated. When to such a solution platinum chloride, acidified with some hydrochloric acid is added, a precipitate ensues which is insoluble on boiling. In solution there remains a body, which I have termed *Istarin*, and which does apparently not combine with platinum chloride. Both bodies, assurin and istarin, seem to have some attraction for each other, like sphingomyelin and kerasin, which causes them to crystallise together, so as to represent a uniform appearance of star-shaped masses of crystals. This union is apparently never definite, but the proportions of the ingredients shift according to the mass, concentration, and temperature of the solvents used for their extraction. On the whole, frequent re-crystallisation from spirit causes the phosphorus in the mixture to rise, and the nitrogen to sink relatively to the phosphorus. But the principle here to be described is isolated as yet only by platinum chloride.

Assurin Hyrochlorate Platinum Chloride.

Yellow crystalline powder, insoluble in boiling spirit, and in ether.

Analyses.

(1.) 0·2071 gave 0·3740 CO_2, and 0·1630 H_2O, = 49·25 % C, and 8·74 % H.

(2.) 0·1780 gave 0·3199 CO_2, and 0·1420 H_2O, equal to 49·01 % C, and 8·85 % H.

(3.) 0·4090 gave 0·07216 Pt = 0·010235 N = 2·50 % N.

(4.) 0·5370 gave 0·08716 Pt = 0·012363 N = 2·30 % N.

(5.) 0·1789 gave 0·01616 Pt and 0·07436 AgCl, equal to 9·03 % Pt, and 10·27 % Cl.

(6.) 0·2130 gave 0·01826 Pt, and 0·08226 AgCl, equal to 8·57 % Pt, and 9·55 % Cl.

(7.) 0·4541 gave 0·10606 $Mg_2P_2O_7$ = 6·52 % P.

(8.) 0·2400 gave 0·05206 $Mg_2P_2O_7$ = 6·06 % P.

Synopsis of the Results of Analyses Nos. 1, 3, 5, 7, *and Theory.*

	Per Cents.	÷ At. Wt.	÷ Pt = 1.	Organ. Molecle.
C	49·25	4·104	91·20	45·6
H	8·74	8·740	194·22	97·0
N	2·50	0·178	3·95	1·97
P	6·52	0·210	4·66	2·33
O	13·69	0·855	19·00	9·5
Pt	9·03	0·045	1·00	
Cl	10·27	0·289	6·42	

These data lead to a formula $2(C_{46}H_{94}N_2P_2O_9+HCl)\ PtCl_4$.

Synopsis of the Results of Analyses Nos. 2, 4, 6, 8, *and Theory.*

	Per Cents.	÷ At. Wt.	÷ N = 2.	÷ Pt = 1.	Organ. Molecle.
C	49·01	4·084	49·8	94·3	47·
H	8·85	8·85	—	203·	101·
N	2·30	0·169	2·	3·77	1·88
P	6·06	0·1954	2·2	4·49	2·24
O	15·66	0·98	—	22·	11·
Pt	8·57	0·0435	—	1·	
Cl	9·55	0·269	—	6·18	

These data lead to a formula $2(C_{47}H_{101}N_2P_2O_{11}+HCl)\ PtCl_4$, which differs a little from the former one, but phosphorus remains slightly exceeding, nitrogen below the theory derived from the platinum chloride as starting base. Assuming nitrogen at two atoms, we come to nearly 50C, but encounter again an excess of ten per cent. in the phosphorus. But the great features of the results of the quantations are evident. We have to deal with a phosphatide in which the radicle of phosphoric acid is contained twice, and which we may therefore term a *diphosphatide*. In this principle there are contained two atoms of nitrogen, which from analogy with other phosphorised bodies, we may suppose to be contained in two different nitrogenised radicles. But even if the two atoms of nitrogen were contained in one and the same radicle, it would still be perfectly correct to term the principle a dinitrogenised diphosphatide. For the nitrogen, although somewhat deficient in both sets of analyses, amounts nevertheless to 3·77 molecles in the latter and to 3·95 in the first set of quantations when compared to platinum as 1.

The companion of assurin, the above-mentioned *Istarin*, is not phosphorised, but it is very difficult to prepare it free from the last traces of phosphorus. Its chemical composition is expressed approximately by the formula $C_{40}H_{82}NO_6$; it therefore seems to belong to the group of nitrogenised fats to be described below. I have prepared and analysed many specimens which have shown the way to the ultimate complete chemical individualisation of the substance. But there has not been time for the carrying out of the laborious operations, which are necessary for the isolation of the quantities required. For it must be borne in mind that before istarin is reached in a systematic course of brain analysis all the other substances described previously must have been removed out of the solution, as well as the residues of the solvents and precipitants.

(7.) Further Study of Kerasin, the second Cerebroside, with a view to fixing its Chemical Constitution, and separating it from Sphingomyelin.

In my first Report on the Chemical Constitution of the Brain (1874) I have described the principal features of this remarkable immediate principle of the brain. As in the case of phrenosin, I have, up to the

present moment, not succeeded in isolating a preparation of kerasin, which, on analysis of a sufficient quantity, proved to be free from phosphorus. The preparation which yielded the lowest amount of phosphorus, namely, 0·08 % (eight parts of phosphorus in ten thousand parts of kerasin) weighed only 4 g, so that after six quantations, for which the materials were taken from these 4 g, there was not left material enough to be employed in a systematic attempt at chemolysis of this particular specimen. But I have examined a considerable number of preparations of kerasin, which contained more of the phosphorised impurity, not exceeding 0·4 % of P; and some of these specimens have yielded information, which when compared with the information derived from the purest specimens, seemed to be independent of the influence of the thus far unavoidable impurity. But the information, though decisive as far as it goes, is only fragmentary as regards the entire problem. And I therefore point out that what I have to report is only the beginning of a great research to be made in the future.

Mode of isolating Kerasin.—The properties of kerasin which are made use of for its isolation are the following. It is easily soluble in hot spirit, and almost insoluble in cold; it tarries to deposit from this solution for a long time, and if its amount does not exceed 1 part in 321 parts of spirit, it is not deposited at all above 28°, and below that temperature very slowly. By this peculiarity it is separated from phrenosin and sphingomyelin, the latter particularly when it is in the state of cadmium-chloride salt. Kerasin does not combine with lead; by this property it is separated from myelin, and the cerebrinacides, which combine with lead. It does not combine with cadmium chloride, and by this reagent is liberated from sphingomyelin, amidomyelin, and paramyelin, which combine with it. It is not soluble in ether, either cold or boiling; by cold ether the kephalins and lecithins are extracted from it, and by boiling ether, krinosin. Kerasin swells when left in contact with ether for some time. In that state it must not be allowed to dry on paper, as it contracts and becomes hard, and adheres so strongly to the paper that it cannot be separated from it without retaining fragments of paper in its substance. Kerasin, crystallised from absolute alcohol in a flask, if allowed to dry slowly in the flask, after the alcohol has been poured off, becomes white and pulverulent, so as to crumble off the sides of the glass, and does hardly become waxy. When deposited from watery solvents, or removed from contact with even anhydrous ether, it becomes on drying hard and horny, or waxy, and difficult to powder.

Solubility of Kerasin in different Quantities of Spirit.—3·8878 g human kerasin, dried on the water-bath, were dissolved in 500 c.c. hot spirit of 84 % strength. On cooling of the solution a deposit of kerasin began to form at 40°, and continued to increase while the temperature sank. 200 c. c. spirit were added to the mixture, and the deposit was re-dissolved by the application of heat. On being again allowed to become cool it now became turbid, and began to make a deposit at 35°. A further addition of 50 c.c. of spirit reduced the depositing point to 34°. Another 100 c.c. reduced the crystallising point to 33°. A further 100 c.c. depressed the temperature of crytallisation to 32°. Three more additions of 100 c.c. spirit each, depressed the crystallising point to 30°, 29°, and 28° respectively. Altogether, therefore, 3·8878 g kerasin required 1250 c.c. of spirit to be kept in solution at 28°; one part of kerasin required 321 parts of spirit to remain in solution at 28°.

Fifty c.c. of a solution of kerasin in spirit, which began to crystallise at 28°, were at that temperature filtered and evaporated to dryness on the

water-bath; the residue weighed 0·1558 g; therefore 1 g kerasin required 320·92 c.c. of spirit at 28° for solution.

Solubility of Kerasin in Acetone.—At the ordinary temperature of the air, 100 c.c. of acetone dissolve 0·1576 g kerasin; at the boiling temperature of acetone, 100 c.c. dissolve 1·0510 g kerasin.

Solubility of Kerasin in Benzol.—When moist kerasin is shaken with large volumes of benzol, it remains as an insoluble gelatinous transparent mass. The filtered benzol leaves no residue on distillation. When kerasin and benzol are warmed, a perfect solution is produced, which can be filtered hot. On cooling, all kerasin is deposited, and the benzol leaves no residue on distillation. This solvent, therefore, may serve for the separation of bodies which are soluble in cold benzol.

Reactions of Kerasin.—Both human and bovine kerasin give a deep purple, with oil of vitriol and sugar at once, with oil of vitriol alone a paler purple after long standing. Kerasin, in a Liebig's drying tube, heated in an oil-bath to from 100 to 150 in a current of dry air, loses about four molecles of water, and is transformed into a brown matter soluble in ether, insoluble in alcohol (Caramel of kerasin).

Elementary Analyses and Theory of Kerasin.—A specimen of kerasin from the ox obtained from 70 g of the principle by frequent fractional re-crystallisation, and containing yet 0·01 °/₀ P, was analysed.

(1.) 0·3441 burnt with lead chromate gave 0·8774 CO_2, and 0·3619 H_2O, equal to 69·54 °/₀ C, and 11·69 °/₀ H.

(2.) Three quantations of nitrogen gave a mean of 1·98 °/₀ N.

A specimen of human kerasin was repeatedly re-crystallised from absolute alcohol, allowed to dry and crumble in flask, and dried over oil of vitrol in vacuo.

(3.) 0·2751 g. fused with flux, &c. gave 0·00072 g. $Mg_2P_2O_7$ = 0·073 °/₀ P. (Impurity.)

(4.) 0·3920 g. burnt with soda-lime, &c. gave 0·0533 Pt = 0·00756 N = 1·92 °/₀ N.

(5.) 0·4392 burnt with soda-lime, &c. gave 0·0590 Pt = 0·00836 N = 1·90 °/₀ N.

(6.) 0·2261 burnt with copper oxide gave 0·2411 H_2O = 11·84 °/₀ H.

(7.) 0·2076 burnt with copper oxide, &c. gave 0·5252 CO_2, and 0·2138 H_2O = 69·01 °/₀ C, and 11·44 °/₀ H.

If we group these analyses so as to let the highest nitrogen come first we obtain the following hypotheses:—

	Per Cents.	÷ At. Wt.	÷ N = 1.
C	69·54	5·795	42·29
H	11·69	11·690	85·32
N	1·92	0·137	1·00
O	16·85	1·053	7·68
	100·00		
C	69·01	5·75	44·23
H	11·44	11·44	88·00
N	1·90	0·13	1·00
O	17·65	1·10	8·46
	100·00		

From Report of 1874:—

	Per Cents.	÷ At. Wt.	÷ N = 1.
C	68·446	5·704	46·0
H	11·395	11·395	92·0
N	1·738	0·124	1·0
O	18·421	1·151	9·2

The two first sets of analyses are probably to be preferred, and it is very probable that the formula of kerasin is $C_{42}H_{85}NO_8$, or $C_{44}H_{89}NO_8$; any formula giving oxygen as eight atoms has theory in its favour, as we shall see below. But in any case the formula cannot be established by analysis alone; chemolyses of kerasin and analyses of the cleavage products are required to enable us to form a final opinion as regards its chemical constitution.

Chemolysis of Kerasin.—I have already proved in a former research that kerasin is a cerebroside, and yields cerebrose by chemolysis with dilute sulphuric acid. For the purposes of the present research I began some chemolyses with baryta, which could, however, not be completed. In particular, the study of the acid products of the chemolysis could not be accomplished for want of quantity. But the basic parts were identified in two forms, and the presence of cerebrose was incidentally confirmed.

Four g of kerasin were mixed with 8 g of baryta hydrate crystals, and sufficient water to produce a thin paste. The mixture was enclosed in a tube and heated during 14 hours to 100°. The watery solution, free from baryta, gave a reaction for cerebrose. The insoluble in water part was extracted with alcohol; the concentrated solution yielded a precipitate of a sulphate. Another part of the matter was not precipitated by sulphuric acid, but remained in solution. It was shown to be psychosin, like the base of the precipitated sulphate. This sulphate dried to a horny mass on the filter, and did not remain pulverulent like sphingosin sulphate. It was dissolved in boiling water, with which it formed a clear solution, and precipitated with a large excess of caustic alkali. It did not rise to the top like an oil, as sphingosin does, on heat being applied, but formed a jelly or semi-soap; with more potash it became emulged; the solution became turbid on cooling; ether extracted nothing from it. The only way to extract the alkaloid was to acidify the solution with sulphuric acid, and add phosphomolybdic acid to it. The precipitate, after decomposition with baryta, yielded to spirit the psychosin, which was transformed into sulphate and analysed.

Analyses of the Sulphate obtained, and Comparison with the Composition of Psychosin Sulphate and Sphingosin Sulphate.

	Found in Product from Kerasin.	Psychosin Sulphate. $2(C_{23}H_{45}NO_7)\,H_2SO_4$.	Sphingosin Sulphate. $2(C_{17}H_{35}NO_2)\,H_2SO_4$.
C	54·67	55·65	60·11
H	10·48	9·27	10·78
SO_4	10·59	9·67	14·37

As the sulphate yields Raspail's reaction without sugar being added, it must be psychosin, mixed, however, with a small trace of sphingosin.

It follows from the foregoing that kerasin, like its principal companion phrenosin, is a cerebroside, namely, a body which contains the sugar *cerebrose*, combined with at least two other radicles. Of these, one is probably *sphingosin*, the alkaloid obtained from phrenosin. The other is certainly a *fatty acid*, but the nature and composition of this acid have not yet been perfectly ascertained.

(8.) On Bregenin, a new Immediate Principle of the Brain, Type of a new Class of Bodies termed Amidolipotides or Nitrogenised Fats; its Isolation and Properties.

I have isolated the principle from both human and bovine brains. It crystallises, fuses like a fat, and contains nitrogen. It is extremely soluble in several reagents, and does not combine with acids, alkalies, or salts.

Mode of Isolation.—Human cerebrins in hot alcoholic solution were treated by baryta water for the purpose of removing the phosphorised ingredient. (I have shown in previous reports that the vaunted purification does not take place.) The precipitated cerebrin bodies were freed from baryta by sulphuric acid in alcohol and re-crystallised. The most soluble part contained the bregenin. From this sphingomyelin was removed by cadmium-chloride; the resulting solution was now evaporated to dryness and extracted with cold benzol; kerasin remained undissolved, while bregenin and some other matters dissolved in the benzol. The matters dissolved in benzol were treated with boiling ether in a suitable apparatus, when a body remained insoluble in boiling ether, while two bodies dissolved; one was deposited from the ether on cooling, *krinosin*, to be described below, while another remained dissolved in the cold ether, namely, *bregenin*. After removal of the ether the bregenin was dissolved in a minimum of watery spirit, filtered hot, and allowed to crystallise. When after repeated crystallisation, removal of the mother-liquor by pressure between bibulous paper, &c., the product consisted of white microscopic leaflets and curved needles only, it was considered pure and analysed. Its solution in spirit does not give precipitates with cadmium or platinum chloride, or with lead acetate, with or without ammonia. As long, therefore, as in a supposed or reputed solution of bregenin such precipitates are produced, they have to be removed as impurities. It is much more soluble in absolute alcohol than in watery spirit; from the former it is deposited as a white solid mass, when the solution is concentrated; when dilute no deposit at all may take place; it is useful to dilute the hot alcoholic solution with boiling water until a permanent turbidity is produced, and allow the mixture to cool. Good crystals are obtained from such a solution.

From a concentrated spirit solution bregenin crystallises between 50° and 25°. At 30° it is not completely deposited. A dilute spirit solution becomes hazy about 40° and begins to crystallise only at 25°. When thus deposited slowly it appears in balls and irregular masses, without any curved needles. These balls can be transferred into needles by resolution in spirit and rapid cooling down of the solution.

Physical and Chemical Properties of Bregenin.—Besides the characters already described in the foregoing, bregenin has the following diagnostic properties. When heated in a water-oven it becomes a little coloured, and then fuses below 98° to an oily fluid. On cooling it solidifies to a hard mass, which is not plastic like fat or wax, but splinters, when cut, in all directions, and is highly electrical. Its fusing point is between 62° and 65°. When the fused and re-congealed body in the filiform tube is again heated, it becomes in part transparent about 62°, but a core remains opaque until a higher temperature is reached, when all is again fused. This is due to the viscosity of the fused body. At the lowest fusing point it is transparent, but so viscous, as to be hardly mobile, or only very slowly mobile; with rising temperature it becomes as fluid as a molten fat, and the interval between the point of fusion and the point of greatest liquidity is considerable. While it

fuses and coalesces in the narrow tube at 62° to 65°, it flows down the sides of the tube only at 75° to 76°, and then on cooling sets with a sudden appearance of opacity at 58°. These experiments were made with the purest specimen, which had been kept in a fused state in the water-oven for hours. The bearing of bregenin with water is very remarkable. When heated with much water, it fuses like a fat, on the top of it. But on agitation it increases in bulk and becomes visco-gelatinous. This hydration, which is completed only on long standing in the water, causes it to increase in bulk considerably. When the swelled mass, after decantation of all water, is heated on the water-bath, it contracts, gives out water, and fuses as in its original state while all water is being evaporated.

With oil of vitriol it gives no purple on standing; the solution remains a little yellow. When sugar syrup is added to this solution it becomes perfectly white, and gives no vestige of purple. From this it is highly probable that bregenin does not contain the radicles either of oleic acid or of sphingosin.

The fused bregenin, when quite cold again, can be powdered. In this state it was subjected to elementary analysis.

Elementary Analyses of Bregenin (from Ox-Brain).

(1.) 0·1675 burnt with copper, &c. gave 0·4520 CO_2, and 0·1891 H_2O, equal to 73·59 % C, and 12·54 % H.

(2.) 0·2537 burnt with CuO gave 0·6853 CO_2 and 0·2951 H_2O, equal to 73·69 % C, and 12·92 % H.

(3.) 0·2063 burnt as before gave 0·5577 CO_2, and 0·2333 H_2O, equal to 73·72 % C, and 12·56 % H.

(4.) 0·5247 gave 0·08216 Pt = 2·22 % N.

(5.) 0·5220 left 0·0794 Pt = 2·15 % N.

Synopsis of Analyses and Theory.

	1.	2.	3.	4.	5.	Mean.	÷ At. Wt.	÷ N = 1.
C	73·59	73·69	73·72	—	—	73·66	6·138	C_{40}
H	12·54	12·92	12·56	—	—	12·64	12·64	H_{81}
N	—	—	—	2·22	2·15	2·18	0·155	N
O	—	—	—	—	—	12·52	0·781	O_5
						100·00		

This body, *bregenin* (from the low German "bregen," head or brain, the latter English word being probably a contraction merely of bregen), $C_{40}H_{81}NO_5$, is thus shown to be approximate in the number of its carbon atoms to both the mononitrogenised phosphatides and to the cerebrosides. From the latter it is sharply distinguished by the low amount of oxygen which it contains. It has almost exactly the composition of the lowest phosphatide of the lecithin group minus the phosphoric acid, for

$$C_{40}H_{81}NO_5 + PH_3O_4 = C_{40}H_{83}NPO_8 + H_2O.$$

This might make us suspect that it was derived from such a group by the mere loss of phosphoric acid, and consequently that it might be a product and not an educt. But such a mode of decomposition of a phosphatide has no analogy in the decompositions which have thus far been artificially produced. For in these phosphorised bodies when they

contained glycerol, this alcohol remained mainly with the phosphoric acid. Supposing, as a mere hypothesis, that bregenin did contain glycerol, then there would be no room for neurin as the nitrogenised radicle. In the absence of neurin, the nitrogenised radicle would have to be one which does not occur in the mononitrogenised phosphatides, as far as they are known, and this would negative the suggestion that bregenin might be derived from such a phosphatide by loss of phosphoric acid. Besides, such a hypothesis also presupposes that the binding radicle is an alcohol like glycerol, and that phosphoric acid is outside the nucleolar arrangement, and merely attached as a side-chain,—a theory which is clearly impossible for those phosphatides, which, as I have shown, contain no glycerol, and is therefore not probable for the others which contain it.

Bregenin is obtained by the foregoing processes in small quantities only, and a great number of preparations were required to yield material sufficiently pure for analysis. It is evident that the greater part of the bregenin present in the brain must, in the process of extraction, pass into the alcoholic and ethereal solution containing lecithin and kephalin; then it must at last remain with the cholesterin, where we accordingly find it. And it is separated from this only by treatment with caustic potash, which chemolyses and removes the products of bregenin, while leaving cholesterin unaltered. It will therefore be seen that much further study will be required to elucidate the physiological quantities and functions of this remarkable substance.

(9.) On Krinosin, a new immediate Principle of the Brain, second Homologue of the New Series of Nitrogenised Fats, or Amido-Lipotides: its Isolation and Properties.

Mode of preparing Krinosin.—Dry, finely-powdered crude kerasin as obtained from the process for the isolation of sphingomyelin by cadmium chloride is exhausted in the ether extraction apparatus by boiling ether. The solvent should be perfectly anhydrous, and be renewed from time to time until it extracts nothing more. For the extraction is but slowly completed, and in most cases requires the apparatus to be kept in action for several days. The hot ether solution deposits krinosin on cooling and standing as a voluminous felted mass of long microscopic fibres, a wilderness of mere lines, mostly without visible end. If the vessel has not been agitated during the cooling process, the felted mass forms a complete jelly with the ether. By strong agitation this structure is destroyed, and there remain only a few lumps of felted matter, looking like bluish paper pulp in an abundance of water. The fibres, having been collected on a filter, dry to a hard mass, when moisture, so easily collected by the cold produced in the course of the evaporation of the ether, is allowed to deposit upon them; when only little moisture has been in contact with them, they dry to a white spongy matter, which is just a little waxy on compression or when rubbed with the finger-nail. When the fibres, taken out of the anhydrous ether, are dried in vacuo over oil of vitriol, they become a perfectly white and pulverisable mass. When this powder is now heated in a water oven to 98° for some time, it becomes somewhat plastic and assumes a yellowish colour. After cooling it is again hard and perfectly pulverisable, but retains the colour acquired by the heating. Krinosin is insoluble in cold, easily soluble in boiling alcohol. It gives no purple reaction with sulphuric acid alone, and none with sulphuric acid and cane sugar. It is consequently not a cerebroside, and does not contain any oleo-cholide radicle.

Elementary Analyses of Krinosin prepared as described in the foregoing.

(1.) 0·2976 gave 0·0454 Pt, equal to 0·006434 N, or 2·16 °/₀ N.
(2.) 0·3000 gave 0·0464 Pt, equal to 0·00657 N, or 2·19 °/₀ N.
(3.) 0·2052 on combustion with lead chromate, gave 3·5360 CO_2, equal to 0·1461 or 71·19 °/₀ C, and 0·2354 H_2O, equal to 0·0262 or 12·74 °/₀ H.
(4.) 0·1942 dried at 98° gave 0·5034 CO_2, or 0·1373 C, = 70·70 °/₀ C, and 0·2069 H_2O = 0·02298 H, or 11·83 °/₀ H.

Synopsis of the Mean of Analyses and Theory of Formula.

	Per Cents.	At. Wt.	÷N=1.
C	70·94	5·911	38·1
H	12·28	12·28	79·
N	2·17	0·155	1·
O	14·61	0·913	5·8

Consequently the nearest formula warranted by the quantation is $C_{38}H_{79}NO_5$. Leaving out of consideration a slight excess of hydrogen, probably due to the substance in analysis 3, not having been dried at a higher temperature, but only in vacuo, there seems good reason to suppose that krinosin is a homologue, in an isomeric series, of bregenin, for, we have

Bregenin - $C_{40}H_{81}NO_5$
Krinosin - $C_{38}H_{77}NO_5$

The homology is probably not in the same series, as the higher carbonised bregenin fuses below 70°, while krinosin does not fuse below the heat of boiling water.

(10.) Review of the Immediate Principles of the Brain and their Derivates which I have discovered in the course of my Researches and described in these Reports.

For the phosphorised principles I adopt the theory of constitution and name which I have given in the introduction, and for which the motives are set forth in the article on sphingomyelin.

Phosphatides.

Of these there are two classes.
I. *Non-nitrogenised Phosphatides.*
II. *Nitrogenised Phosphatides.*

Of the non-nitrogenised class only *monophosphatides*, that is to say, bodies which contain the radicle phosphoryl only once, are known; of the nitrogenised class, however, *diphosphatides*, which contain the radicle phosphoryl twice, are known; the monophosphatides are again divided into *mononitrogenised and dinitrogenised.*

I. *Non-nitrogenised Monophosphatides.*

Such an acid is the product *kephalophosphoric acid*, $C_{35}H_{72}PO_9$, the lead salt of which had the formula $C_{35}H_{70}PbPO_9$; it had been derived from kephalin by short chemolysis, and was apparently produced by the loss of neurin and glycerol only. Considered as a phosphatide it would have the constitutional formula:—

$$OP\left\{\begin{matrix} C_{17}H_{28}O_3\ (\text{kephalyl}) \\ C_{18}H_{35}O_2\ (\text{stearyl}) \\ HO \end{matrix}\right\} + 2H_2O$$

Or if it contained glyceryl, in which case however the carbon as found by analysis is rather deficient:—

$$OP\left\{\begin{matrix}C_{17}H_{28}O_3\\C_{18}H_{35}O_2\\C_3H_7O_3\end{matrix}\right\}=C_{38}H_{70}PO_9.$$

If we add to this group the anhydrous radicle of neurin, $C_5H_{11}N$, we have kephalin, $C_{43}H_{81}NPO_9$.

Two similar acids occur in the buttery matter, and form insoluble lead salts, namely:—

First (*crystallised*) *Acid from Buttery Matter.*
Second (*non-crystalline*) *Acid from the same.*

These bodies have not yet been sufficiently studied; it is certain that they are monophosphatides into the constitution of which nitrogen does not enter, but it is not certain whether they are educts or products.

2. *Nitrogenised Phosphatides.*

Of these the following varieties are known, namely, *monophosphatides* and *diphosphatides*. The monophosphatides occur as *mononitrogenised* and as *dinitrogenised*, but the diphosphatides have as yet been observed as dinitrogenised only.

A. Mononitrogenised Monophosphatides.

$$N : P = 1 : 1.$$

Group of the Kephalins.

Kephalo-stearo-glycero-neuro-phosphatide, kephalin.

$$OP\left\{\begin{matrix}C_{17}H_{28}O_3\ (\text{kephalyl})\\C_{18}H_{35}O_2\ (\text{stearyl})\\C_3H_7O_3\ (\text{glyceryl})\\C_5H_{11}N\ (\text{neuryl})\end{matrix}\right\}C_{43}H_{81}NPO_9.$$

To be a kephalin a phosphatide must contain the radicle *kephalyl* or a a homologue, which governs most of the properties of the product; its peculiar properties prevail over those of the second acid.

A kephalin with palmityl $C_{16}H_{31}O_2$, in place of stearyl would have the summary formula $C_{41}H_{77}NPO_9$, a kephalin with margaryl, $C_{17}H_{33}O_2$ would be $C_{42}H_{79}NPO_9$. If there were several homologous kephalic acids, such as some analyses seem to indicate, then for a kephalyl of formula $C_{18}H_{30}O_3$ combined with either stearyl, margaryl of palmityl, the foregoing formulæ would have to be increased by CH_2 each, so that the most complicated kephalin might contain 44 atoms of carbon. None of these hypotheses explain either the deficiency of hydrogen, or the excess of oxygen (namely as compared to the theory derived from chemolysis) in the various kephalins, and their compounds which have been analysed. This discrepancy can only be eliminated by further researches carried on by the light of those given in the foregoing:—

Kephalin, empirical formula - - $C_{42}H_{79}NPO_{13}$.
,, perhaps - - - $C_{42}H_{69}NPO_8+5H_2O$.
Kephalin cadmium chloride - - $C_{42}H_{79}NPO_{13}$, $CdCl_2$.
(Dissociates partly in watery reagents.)
Kephalin hydrochlorate platinum chloride $2(C_{42}H_{79}NPO_{13}HCl)\ PtCl_4$.
Kephalin with amidokephalin (Mixture) - $\left\{\begin{matrix}C_{42}H_{80}N_2PO_{13}.\\2(C_{42}H_{79}NPO_{13}.\end{matrix}\right\}$
Oxykephalin cadmium chloride - - $C_{42}H_{79}NPO_{14}$, $CdCl_2$.
Peroxykephalin - - - - $C_{42}H_{79}NPO_{15}$.
Peroxykephalin, diplumbic - - $C_{42}H_{75}Pb_2NPO_{15}$.
Kephaloidin - - - - $C_{42}H_{79}NPO_{13}$.
Oxykephaloidin cadmium chloride - $2(C_{42}H_{75}NPO_{14})CdCl_2$.

There is no doubt of the existence of a dinitrogenised kephalin, termed *amidokephalin* which was mixed to the extent of one third nearly with a preparation of kephalin described in the research. This body is less soluble in ether than kephalin. It is no doubt constituted analogously to the amidomyelin described in a special research. But as this amidokephalin has not been finally examined, I am unable to give any further data concerning it.

Of the decomposition products of kephalin by chemolysis I have already mentioned kephalophosphoric acid under the non-nitrogenised monophosphatides.

Kephalic acid is the principal chemolytic product of the process in which the phosphatide is almost entirely severed. All its salts are soluble in ether, and insoluble or little soluble in alcohol. It assumes, n the free state or in combination, a brown colour, from which it has not yet been possible to free it by any known process. The formulæ which can be constructed for the acid vary between $C_{19}H_{32}O_3$ and $C_{17}H_{28}O_3$, or $C_{17}H_{30}O_3$, and $C_{17}H_{32}O_3$. They are mainly derived from *barium salts*, which contain from 18·28 to 20·05 °/₀Ba.

Kephalate of barium. Easily soluble in ether.

Kephalate of lead. Easily soluble in ether.

Stearic acid, $C_{18}H_{36}O_2$, m.p., 69·5, examined in the free state and as barium and lead salt.

Stearate of barium, $2(C_{18}H_{35}O_2)$ Ba.

Stearate of lead, $2(C_{18}H_{35}O_2)$ Pb.

Glycerophosphoric acid, $C_3H_9PO_6$ (a monophosphatide) was isolated from kephalin as :—

Lead salt, $C_3H_7PbPO_6$.

Calcium salt, $C_3H_7CaPO_6$, and in the new form of

Acid calcium salt, $C_6H_{16}CaP_2O_{12}$.

Barium salt, $C_3H_7BaPO_6$. This could be obtained crystallised, monohydrated, and as alcoholo-hydrate, in which latter state one molecle of—

Acid barium salt, $C_6H_{16}BaP_2O_{12}$, therefore composed similarly to the calcium salt, contained at least three molecles of alcohol and six of water.

Kephalin further yielded—

Neurin, $C_5H_{13}NO$, and another base, perhaps derived from neurin.

The second base in amidokephalin was not made out.

Group of the Lecithins.

$$N : P = 1 : 1.$$

I have given the explicit formulæ of these bodies considered as phosphatides in the present report. The contracted formulæ are :—

Oleo-palmito-glycero-neuro-phosphatide,
$C_{42}H_{82}NPO_8$.

Oleo-margaro-glycero-neuro-phosphatide,
$C_{43}H_{84}NPO_8$.

Oleo-stearo-glycero-neuro-phosphatide,
$C_{44}H_{86}NPO_8$.

Of the second lecithin there have been analysed the following salts :—

$C_{43}H_{84}NPO_8 + CdCl_2$
$C_{43}H_{84}NPO_8 + HCl$
$2(C_{43}H_{84}NPO_8 + HCl)\ PtCl_4$

In the chemolyses the *oleic, margaric, palmitic,* and *stearic acids* were isolated, *oleic acid* characterising the phosphatide; stearic acid was always present in very small quantity only; it was probable that of stearic acid the *two isomers* discovered in these researches may sometimes be present in lecithins. Regarding the reputed identity of margaric and palmitic acid, I still entertain some doubts, which have been rather increased than diminished by the discovery of the isomers alluded to. Besides these acids the lecithins always yielded *glycerophosphoric acid* and *neurin.* The lecithins are easier to chemolyse than any other phosphatides, but on the whole I do not think them so labile as they are reputed to be, and as, in consequence of my earliest experiments, I believed them to be. The employment of the cadmium chloride, of the benzol process, and other improvements in manipulation, have no doubt a share in this better conservation.

Group of Paramyelins.

N : P = 1 : 1

Paramyelin was recognised in the first research, but fully isolated only in the present one. The properties by which it is diagnosed and separated from the other phosphatides have been fully described in the relative chapters of the present report, but its chemolysis has not been undertaken.

Paramyelin $CdCl_2$, human $C_{34}H_{68}NPO_8 + CdCl_2$
Paramyelin $CdCl_2$, ox $C_{38}H_{76}NPO_9 + CdCl_2$

It is not maintained that the compounds are unitary, and do not contain one or more similar principles, analogous to and homologous with the foregoing.

Paramyelin also forms a hydrochlorate platinochloride salt.

Group of the Myelins.

N : P = 1 : 1.

Myelin is a very firm compound, and according to its elementary composition belongs to the kephalin and lecithin-like bodies. But it must be left to be decided by chemolytic study, whether this is actually the case or not. Myelin has, on the whole, the properties of a dibasic acid, and combines with an atom of lead in substitution for two atoms of hydrogen. On the other hand it does not combine with cadmium chloride. Paramyelin, which presents the most similarity to myelin in its physical characters, on the contrary, does not combine with lead, but combines with cadmium chloride. Kephalin, on the other hand, combines with both these reagents, though the compounds are not always definite, as has been fully exhibited.

Myelin - - - $C_{40}H_{75}NPO_{10}$, in lead salt.
Myelin - - - $C_{39}H_{77}NPO_9$, free.
Myelin-lead - - $C_{40}H_{73}PbNPO_{10}$.

There may be myelins varying in carbon from 39 to 44 atoms. The reason for these variations can be discovered only by chemolysis.

B.—*Dinitrogenised Monophosphatides.*

N : P = 2 : 1.

Group of Amidomyelins.

With regard to this group, it is not necessary to repeat any of the details which are fully set forth in the present report.

An amidomyelin has been proved to exist in five forms, one of isolation, four of combination :—

Amidomyelin	$C_{44}H_{88}N_2PO_9$.
Amydomyelin hydrochlorate	$C_{44}H_{88}N_2PO_9$, HCl.
Amidomyelin monocadmium chloride	$C_{44}H_{88}N_2PO_9$, $CdCl_2$.
Do. Dicadmium chloride	$C_{44}H_{88}N_2PO_9 + 2\ (CdCl_2)$.
Do. Hydrochlorate platinochloride	$2\ (C_{44}H_{88}N_2PO_{91} + HCl) + PtCl_4$.

Amidomyelin has not yet been chemolysed.

Group of Amidokephalins.

See notice and formula under kephalin in this chapter.

Group of Sphingomyelins or Apomyelins.

The details of the analysis and theory of these remarkable bodies are fully set forth in the present report. They are distinguished from the amidomyelins by containing a much higher proportion of carbon in relation to nitrogen and phosphorus; they yield no glycerol or glycerophosphoric acid on chemolysis, but contain an alcohol with perhaps 18 carbon atoms in its molecle, which may occupy the place in the phosphoryl radicle, which in the lecithin-like bodies is occupied by glycerol.

Sphingomyelin (ox)	$C_{52}H_{104}N_2PO_9 + H_2O$.
Apomyelin (man)	$C_{54}H_{109}N_2PO_9$.
Sphingomyelin (theory from chemolysis)	$C_{58}H_{115}N_2PO_7 + 2\,H_2O$.
Sphingomyelin cadmium chloride	$C_{51}H_{99}N_2PO_{10} + CdCl_2$.
Do. dicadmium chloride	$C_{51}H_{99}N_2PO_{10} + 2\ (CdCl_2)$.

Derivates by Chemolysis.

Sphingomyelic acid (mononitrogenised)	$C_{48}H_{95}NPO_{12}$.
Sphingosin	$C_{17}H_{35}NO_2$.
Base (as sulphate)	$C_{20}H_{41}NO_2$,
Sphingol, a new alcohol	$C_{18}H_{36}O_2$, or $C_9H_{18}O$.
Sphingostearic acid (m.p. 57°)	$C_{18}H_{36}O_2$.
Neurin	$C_5H_{13}NO$.
Nitrogenised product	$C_{35}H_{81}NO_5$.
Phosphoric acid	H_3PO_4.

C.—*Dinitrogenised Diphosphatides.*

N : P = 2 : 2.

Of this order there is at present only one representative known, and that one as platinum salt only.

Assurin (theory)	$C_{47}H_{101}N_2P_2O_{11}$.
Do., hydrochlorate platinochloride	$2\ (C_{47}H_{101}N_2P_2O_{11} + HCl)\,PtCl_4$.
Assurin (theory)	$C_{46}H_{94}N_2P_9O_9$.
Do., hydrochlorate platinochloride	$2(C_{46}H_{94}N_2P_2O_9 + HCl)\,PtCl_4$.

The phosphatides are the nucleolar materials in all structures which serve the purposes of multiplication, growth, and sentient and contractile existence. They are present in every particle of bioplasm and in every product of bioplasm. Thus the blood-corpuscles contain both mono- and dinitrogenised phosphatides. The bile, a product of the liver cells, contains a monophosphatide which is perhaps tetra-nitrogenised. Still higher nitrogenised is the phosphatide excreted by the lactiferous glands, casein, the material from which all tissues can be constructed. To this class belong the bodies which have been as yet imperfectly

recognised, and which from the fact of their constituting the greater part of the nuclei of both animal and vegetable cells have been termed nucleins. It is now evident why organisms at all stages of their growth require phosphorus as a never-failing element of their food; why bacteria thrive best when they have penetrated to the nucleolar elements of bioplasm; why the diminution of phosphates in the body produces general marasm of all tissues, the brain and bones included.

Nitrogenised Non-Phosphorised Principles.

Group of the Cerebrosides.

Phrenosin - - - $C_{41}H_{79}NO_8$.

Of this body, which was discovered in the course of these researches, the composition, theory, and chemolytic products have also been discovered and fully described.

Definition and Formula of Constitution of Phrenosin.

Neurostearo-sphingoso-cerebroside.

Saccharoid radicle $C_6H_{10}O_4$. { Fatty acid radicle $C_{18}H_{35}O_2$. / Alkaloid radicle $C_{17}H_{34}O_2$. }

Derivates by Chemolysis and Synthesis of Products.

Cerebrose - - -	$C_6H_{12}O_6$.
Neurostearic acid - -	$C_{18}H_{36}O_2$.
Neurostearic ether - -	$C_{20}H_{40}O_2$. or $(C_2H_5)C_{18}H_{35}O_2$.
Sphingosin - - -	$C_{17}H_{35}NO_2$.
Do. sulphate - -	$2(C_{17}H_{35}NO_2)H_2SO_4$.
Do. hydrochlorate -	$C_{17}H_{35}NO_2$,HCl.
Psychosin - - -	$C_{23}H_{45}NO_7$.
Do. sulphate and hyhrochlorate -	
Aesthesin - - -	$C_{35}H_{69}NO_3$.
Nitrited phrenosin nitrate -	$C_{41}H_{79}N_3O_{13}$, or $C_{41}H_{78}(NO_2)NO_8+HNO_3$.
Caramel of phrenosin - -	$C_{41}H_{71}NO_4$.
Caramel of psychosin - -	$C_{23}H_{37}NO_3$.

Kerasin may, like phrenosin, comprise a number of analogously constituted bodies, of which the most probable formulæ are:—

Kerasin - - - -	$C_{42}H_{85}NO_8$.
Do. - - - -	$C_{44}H_{89}NO_8$.
Do. - - - -	$C_{46}H_{92}NO_9$.

Products by Chemolysis.

Psychosin, as sulphate - -	$2(C_{23}H_{45}NO_7)H_2SO_4$.
Cerebrose - - -	$C_6H_{12}O_6$.
Fatty acids of the formula -	$C_nH_{2n}O_2$.

Group of the Cerebrinacides.

Cerebrinic acid may be a cerebroside in which three hydroxyls are replaced, two by fatty acid radicles, one by an alkaloid radicle.

Cerebrinic acid - - -	$C_{59}H_{113}NO_9$.
Caramel of cerebrinic acid - -	$C_{59}H_{105}NO_5$.
Spherocerebrin - - -	$C_{58}H_{123}NO_{17}$.
Principal cerebrinacide - -	$C_{55}H_{113}NO_{21}$.

Second cerebrinacide under investigation.

Group of Cerebrosulphatides.

Bodies containing *sulphur* (maximum found 4 %) and occurring with cerebrinacides in the lead salts of the latter.

Cerebrosulphatide under investigation.

Group of Amidolipotides or Nitrogenised Fats.

Bregenin - - - - $C_{40}H_{81}NO_5$.
Krinosin - - - - $C_{38}H_{77}NO_5$.

Homology of these two bodies, which is suggested by a comparison of the formulæ, may not be assumed, as the one with the higher number of carbon atoms fuses at a much lower temperature than the one with the lesser number of carbon atoms.

Group of Alkaloids.

Hypoxanthin - - - - $C_5H_4N_4O$.
Do. hydrochlorate - - - $C_5H_4N_4O, HCl + H_2O$.
Do. do. with platinum-chloride - - 2 $(C_5H_4N_4O,HCl)$ $PtCl_4$.
Do. nitrate - - - - $C_5H_4N_4O$, HNO_3.
Do. and silver nitrate - - $C_5H_4N_4O$, $Ag\ NO_3$.
Do. and silver - - - $C_5H_4N_4O$, Ag_2.

Hypoxanthin and its compounds were known in science, but isolated with greater precision from brain, particularly by the phosphomolybdic acid process.

Second alkaloid - - - - $C_{15}H_{20}N_6O_5$.
Do. hydrochlorate gold chloride - $C_{15}H_{20}N_6O_5$,HCl, $Au\ Cl_3$.
Third alkaloid - - - - C_3H_4NO.

Group of Amido Acids and Imides.

Leucin and allied principles - - - $C_6H_{13}NO_2$.
Do. and copper (monocupric dileucin) - $2(C_6H_{12}NO_2)$ Cu.
Tyrosin - - - - - $C_9H_{11}NO_3$.
Do. and mercury nitrate compounds.

These bodies, otherwise well known in science, were for the first time isolated from the brain in the course of these researches. Urea was, isolated from brain and cerebrospinal fluid, particularly in disease.

Non-nitrogenised Alcohols.

Cholesterin, m.p. 145° - - $C_{26}H_{44}O$.
Phrenosterin, m.p. 137° - - $C_{26}H_{44}O$.
Inosite - - - - $C_6H_{12}O_6$.
Do. tricupric trihydrate - - $C_6H_{12}O_6 + 3\ CuO + 3\ H_2O$.
Do. a peculiar one from human brain.

Non-nitrogenised Organic Acids.

Formic acid - - - - CH_2O_2.
Sarkolactic acid - - - - $C_3H_6O_3$.
Do. zinc, calcium and barium salts
Succinic acid - - - - $C_4H_6O_4$.
Do. iron and barium salts.
New tribasic acid - - - $C_3H_8O_4$.
Do. silversalt - - - $C_3H_5Ag_3O_4$.

Albuminous Substances.

Nitrogenised-Sulphatide-Phosphatides.

These substances could be examined with advantage only after all the foregoing were known. They have been studied in the first instance by chemolysis, and have yielded very remarkable results.

Derivates by Chemolysis.

Albuminol.
Volatile sulphurised body.
Ammonia and compound ammonias.
Fatty acid.
Oxalic acid.
Phosphoric acid.
Sulphurous acid.
Acetic acid.
Alkaloids.

Leucein - - -	- $C_6H_{11}NO_2$.
Second alkaloid - -	- $C_{12}H_{25}N_3O_7$.
Do. copper compound	- $C_{12}H_{25}CuN_3O_7$.
Third alkaloid.	

Amido acids.

Leucin - - -	- $C_6H_{13}NO_2$.
Do. copper compound	- $2(C_6H_{12}NO_2)$ Cu.
Glycoleucin - -	- $C_6H_{13}NO_2$.
Do. copper compound	- $2(C_6H_{12}NO_2)$ Cu.

The cupric compounds are *isomeric* as well as the leucins themselves.

Imides:

Tyrosin - - -	$C_9H_{11}NO_3$.
Do. calomel mercuric oxyde	$2(C_9H_{10}NO_4+HgCl)+HgO$.

Inorganic Ingredients or Mineral Salts.

Metals.—Sodium, potassium, calcium, magnesium, iron, manganese, copper.

Metalloids.—Chlorine, sulphur, phosphorus, carbon (the last three as oxygen acids).

These salts are distributed as soluble and insoluble salts over the albuminous, phosphatide, cerebroside, and extractive substances.

LONDON: Printed by EYRE and SPOTTISWOODE
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

NOV 2 4 NOV 1969